taaacacgaa gcggaaaaaa gatttgaaca tcttcaaatc ttatatggtg gagaattgta 60

ctatacaagt gatatgttag aaaaactgaa gttaaagcaa attccaactt taaacaatac 120

gaaatttgct ttaattgaat tttctatgca aacttcttgg aaagatattc atacagcttt 180

gtcaaatgtt ttaatgcttg gtattacacc agtcgttgcg catatagaga ggtataacgc 240

tttagagaat caaaaagaac gggtgaagga aattattaat atggggtgtt acacacaaat 300

aaatagttcc catattttga aacaaaaact ttttaatgat aagcataaac gctttaagaa 360

aagagcccgt tatttttag aggaaaattt agtgcatttt gtagcgagtg atatgcataa 420

ccttgatgtt agaccgccat ttttagcaga agcttataag attatctgta gagatttcgg 480

taaagaacgt gctaaccaac tttttattga 510

<210> 608
<211> 534
<212> DNA
<213> Streptococcus agalactiae

<400> 608
taatcacatt tgttgccatt gcatttgcaa cagctggact tttctatagt ctttttattg 60

ttacgccaca atatacttct tcaacaagga tatatgtcat taaccctaat acccctaata 120

atagtattac tgcacaagat ctacaagcgg ggagttttct tgcaaatgac tataaggaga 180

ttattacgtc tactgacgtt ctagaaaaag ttatttcttc tgaaaaattg aattatcctt 240

cgtctcagtt gctacaaaaa ataacagttt ctattttaaa agatacacgt gttatttcaa 300

tatcggtcga agatgctaat ccaaaaatgt ctcaaaaatt agcaaattca gttagagaag 360

cagcagtttc aaaaatcaag gcagttactc aagtagaaga tatcactact cttgagaagg 420

gaaatttacc taaagcacca tcttctccta atattaaaaa gaatgtacta atcgggttta 480

ttgttggtgc aggattatcg actattgttt tagttattat gggtattttg gatg 534

<210> 609
<211> 585
<212> DNA
<213> Streptococcus agalactiae

<400> 609
cgtacaaaca tacagtttag tggaaaggaa aataaaattc ttgcaattac ctctgttagg 60

gaaggggaag gaaaatccac tacttcaaca agtttagctt tatctttagc tcaagcagga 120

tttaaaacat tattaattga tgcggatact aggaactctg ttatgtctgg aacctttaaa 180

gcaactggaa ctattaaagg cttgacgaat tatttatcag gtaatgcaga tcttggagat 240

attatctgtg aaaccaatgt tcctagactg atggtcgttc cttcagggaa agtaccacca 300

aatccaacag cattacttca gaacgcttat tttaataaga tgattgaagc tattaaaaat 360

atatttgatt atattatcat cgatactcca cctattggtt tagttgttga tgccgcaata 420

atcgctagtg cttgtgatgg ctttgtttta gtaacccaag caggtagaat aaaacgtaat 480

tatgttgaaa aagcaaaaga acagatggaa caaagtggtt caaagttctt aggtattatt 540

cttaataaag ttaatgaatc tgttgctact tacggcgatt atgga 585

<210> 610
<211> 527
<212> DNA
<213> Streptococcus agalactiae

<400> 610
tttggagtcg tggctatctt gaagagttta aaatggtatt gaaatacagc ttttactata 60

ttttcatatc aagttcatta ttttttattt ttaaaaactc ttttacaacg acacgacttt 120

cctttttttac ttttattgct atgaattcga ttttattata tctattgaat tcatttttaa 180

aatattatcg aaaatattct tacgctaagt tttcacgaga taccaaagtt gttttgataa 240

cgaataagga ttctttatca aaaatgacct ttaggaacaa atacgaccat aattatatcg 300

ctgtctgtat cttggactcc tctgaaaagg attgttatga tttgaaacat aactcgttaa 360

ggataataaa caaagatgct cttacttcag agttaacctg cttaactgtt gatcaagctt 420

ttattaacat acccattgaa ttatttggta aataccaaat acaagatatt attattgaca 480

ttgaagcaat gggagtgatt gtcaatgtta atgtagaggc acttagc 527

<210> 611
<211> 360
<212> DNA
<213> Streptococcus agalactiae

<400> 611
tgatcaagaa gtgttcattc aaacgggtta ctcagacttt gaacctcaga attgtcagtg 60

gtcaaaattt ctctcatatg atgatatgaa ctcttacatg aaagaagctg agattgttat 120

cacacatggc ggcccagcga cgtttatgtc agttatttct ttagggaaat taccagttgt 180

tgttcccagg agaaagcagt ttggtgaaca tatcaatgat catcaaatac aatttttaaa 240

ttcgattgcc cacctgtatc ccttggcttg gattgaagat gtagatggac ttgcggaagc 300

gttgaaaagg aatatagcta cagaaaaata tcagggaaat aatgatatgt tttgtcataa 360

<210> 612
<211> 384
<212> DNA
<213> Streptococcus agalactiae

<400> 612
tgaggtttga tgagaactta aaaattggtg aggatttact ttttaattgc aaactcttat 60

gtcaagagca ccgtatagtc gtagatacga cttcttcctt atatacttat cgaattgtaa 120

aaacttctgt aatgaatcag aaattcaacg aaaactcatt agattttata acaattttta 180

atgaaataag tagtttggtt cctgccagat tagctaatta tgttgaagcg aaatttttaa 240

gagaaaagat aaagtgtctc cgaaaaatgt ttgaattagg tagtaatatt gacaataaaa 300

tcaaagtaca acgagagatt tttttcaaag acattaaatc atacccgttc tataaagcgg 360

tcaaatactt atcattaaag ggat 384

<210> 613
<211> 514
<212> DNA
<213> Streptococcus agalactiae

<400> 613
gggttgtcag aagctagaaa ctatggaatt tatcattcaa agggaaaata cttaactttt 60

gttgattcag atgataaagt ttcctctgat tacatagcga atttgtataa tgctattcaa 120

aaacatgatt cgtctatagc tatcggtggc tatttagaat tttatgaaag acataatagc 180

ataagaaatt atgaatattt agacaaagtg atatcagttg aagaagcact actaaacatg 240

tatgacatta aaacttatgg ttcaattttt attactgcat ggggaaaatt attccataaa 300

tctatattca atgatttaga atttgcatta aataagtatc atgaggatga gttctttaac 360

tataaagcat acttaaaagc taattctata acatacatag acaagcctct ctatcattat 420

cgtatacgag taggtagtat catgaataat agtgataatg ttataattgc tagaaagaaa 480

cttgatgttt tatcagcatt agacgagcga ataa 514

<210> 614
<211> 524
<212> DNA
<213> Streptococcus agalactiae

<400> 614
tattcttggg tggttctgtc gtaaaacgag taattaaaac ttacttattt aaaaagtatg 60

ttccgtatgg tttttcaaaa tattgtctct caattgaggt taattcttta gtggggttac 120

ctcatgacat aaggagtaag aaatataaag aactaccgag aaaaaaatta tttgatagtc 180

ttaacaaaga acaaaaatca ctgattttca aaatatttaa aacaaaacca ttaactataa 240

ctccaaagtc agtattattg ttgacacagc cacttgcaca agataaatgt tataaaacac 300

ctacagagag gtttcaaagt attcaagagc aatacgatta ttttgacgat attgtccagg 360

aatatagaac gttagggtac aatgtttatt taaaagttca tcctagagat gtagtagatt 420

attccaaatt gccggtagag ctattaccat caaatgttcc tatggaaatt atagagttga 480

tgtcaacagg tcggttcgaa tgtgggataa cacattcgtc cact 524

<210> 615
<211> 613
<212> DNA
<213> Streptococcus agalactiae

<400> 615
tacactcggg aatttattgg tgcaaggatt agcctttatc acacttccca tctatactcg 60

ggttatctca acagaagttt atggccaata tagtttatat gtcgcttgga tgaatattat 120

tatgcttttt attggccttc agacgagcgg ttctttaagt tcagcccggg tcaaatacgg 180

agaagaattt aaaagctatt cagggagtgc cttttctgta ggtaatatat ggtttcttat 240

tatacttttg atagcttttc tatttagaag ttttcttgca ccattagttg gtttttctga 300

atctattttt ttattaatgg tgtgtcaaag ttacgctagc tatgtggtga ctttctttgg 360

tcagtatttt atacaacaac agaggagttt ggctaattta atattatcct tagccaatgc 420

agtttcatct gttgcactat ctctattttt aatttttcat tggtccgatg actttttatc 480

tagggttttt ggagcttttg ttcctactat aataactgga atagttgcct ttgcttatat 540

ttattatcat agcaaatctt tttacaatcc taagtatttt cggttcattg tcactgtgtc 600

tgttcccttg att 613

<210> 616
<211> 451
<212> DNA
<213> Streptococcus agalactiae

<400> 616
tcaggactgt ttatttttat gattaaacga aacttcctct aataaatagt caataaattt 60

ttgtcccatt tttgaaaggt ttgctttgtc gtgtcggata tagacaatat caataacatc 120

atccacgtca agagggattg cgacaatttc gtcaccgttc aattttgagt tgaggatacc 180

agttgccact gtataaccat ctaatccaat cattaaatta aacagagttg ctctatcact 240

gacaacaatg gattttgggt gaggaatttg agacatcatt tcctcagaaa agtagaaaga 300

attatgcagg ccttgatcat aactcagata aggataatct tctaaatctt tcatacttaa 360

tttttttcta ttagctaagg gattggattt gctcacgaaa atatgaggtg tagtagtaaa 420

aagagttgtg gcaattaagg aattatcgtc g 451

<210> 617
<211> 361
<212> DNA
<213> Streptococcus agalactiae

<400> 617
aaagttcgta ttgggtcatg tctgtgccat taaagagagc tacaaaagcg ttaaccacaa 60

atgcatagtg ttgtgaagaa acgctgaaca gctcacgact tgtattatca cccttataac 120

gctcttcaag aagtgctgtt tgttctagaa tttgtcgcgc atatgacaga aattccatac 180

catcttttgt taacgttatt ccttttggat ttcgaataaa aatttggata cccatctcag 240

tctcaaggtt cctaacagcg tttgaaagtg aaggttgggt aatgtagagt tgtttagcgg 300

cttcattcat gctaccagtt tctacaatct taataacata ttgtaattgt tgaattctca 360

t 361

<210> 618
<211> 383
<212> DNA
<213> Streptococcus agalactiae

<400> 618
cgtttcctta gggactgttt tatctgcggc gatgatttta cctattttag cctttattca 60

tactagttca gcttttacga ctcttagcac aattgtaggg acttttattg gttttatttc 120

aggagtatat ctctcaattg gctcggtagg aaaagcatta caacaggtta tgacatggtt 180

tccattgact caaatcaatt ctcttttgaa acaggtctta atgaagggtt ctattgcgaa 240

ggtatttgac aaagccaacg aagccactgt ctctaactat aaagaatcat atggtgttgt 300

tttgcgtaat gctgatggag aaaggctgag taatcacttt atgttgattt atatcattgc 360

cctcattctt attttattgg caa 383

<210> 619
<211> 535
<212> DNA
<213> Streptococcus agalactiae

<400> 619
ttacctatgg ttgtttagat tggaatagta gctttagtgg ttttctttta attgattcga 60

aaagtcgtag tggacaggca atcacttatc tatataaaac tatcttaaag aagataacaa 120

aactgaagtt ttctaatatc tataccgaaa tcagtaacta caataaaccc tccttagctt 180

tatcaaaatt gaatggcttc aaagagtatg ataagacata tgaagacata ctgcattgtc 240

gatcattgcg tagtcacctc cctaagatat tgaatacgtt tcgtatttcg aattattatg 300

gtaaaacata cgacatatca acttttcaaa ttatggagga aattgaaaat cccttggaag 360

aggagacaga aattaggacc aaagtctctg atgaagaaat attatttaaa gcagaagata 420

gtgcttcact tccttattat ttaaaaatga gcttgtttca aatggaaatt gctaagttag 480

ataaccgtta tgttttacaa gttgactttt tatcggaaca agtaaagagg gttcg 535

<210> 620
<211> 519
<212> DNA
<213> Streptococcus agalactiae

<400> 620
ctggtgaaga atgtgaagaa gccttagacc ttgtgattcc taagaatatt gtatttgcag 60

atacagatac ttgtggctac actttttac tcaatgaaga tggaacagtt tatgatgatg 120

tgactttcta caaatttgat gataaatatt ggttggctag tcataaagct ttggattctt 180

atttagacaa catcaatttt gactataccg taacagatat ttctgacgag tataaaatgc 240

tgcaaattga aggaagatat tcgggagaaa ttgctcagtc attttatgaa tatgatattt 300

caacacttaa ttttcgtact ttgatagaga tgacttataa aggtgagaaa ggttatcttg 360

ctagatttgg tttttctgga gaatttggct atcaattttt cctaccatct tctatttttg 420

ctacttttgt ttcggatgtc tgtgaaggta tagcagagtg tggggatgaa cttgatagat 480

atttaaggtt tgaagtggga caacccatta ctgatattt 519

<210> 621
<211> 573
<212> DNA
<213> Streptococcus agalactiae

<400> 621

cgagcataaa cagcatctct tcgacttaaa agaaggaatt tctaaacatt tatataaaaa 60

tcacgactct attttagaat cttatacagg aagcataact agtgacccag aggttcctga 120

gcaatacaaa gatgagacac gtaattttaa atttgctttt accgcttttg aagaggctct 180

tgcttcttca ggtgttaatt taaaagctta tcataatatt gctgtgtgtt tagggacctc 240

acttggggga aagagtgctg gtcaaaatgc cttgtatcaa tttgaagaag gagagcgtca 300

agtagatgct agtttattag aaaaagcatc tgtttaccat attgctgatg aattgatggc 360

ttatcatgat attgtgggag cttcgtatgt tatttcaacc gcctgttctg caagtaataa 420

tgccgtaata ttaggaacac aattacttca agatggcgat tgtgatttag ctatttgtgg 480

tggctgtgat gagttaagtg atatttcttt agcaggcttc acatcactag gagctattaa 540

tacagaaatg gcatgtcagc cctattcttc tgg 573

<210> 622
<211> 610
<212> DNA
<213> Streptococcus agalactiae

<400> 622
tcttatcatc tgctgcttcc atttctaaga atgaatcact ttctataacc tatgaaaaag 60

ttgctagtaa tttcaacgac tttgaagcat tacgctttaa aggggctaga ccacccaaaa 120

ctgtcaaccc agcacaattt aggaaaatgg atgatttttc caaaatggtt gccgtaacaa 180

cagctcaagc actaatagaa agcaatatta atctaaaaaa acaagatact tcaaaagtag 240

gaattgtatt tacaacactt tctggaccag ttgaggttgt tgaaggtatt gaaaagcaaa 300

tcacaacaga aggatatgca catgtttctg cttcacgatt cccgtttaca gtaatgaatg 360

cagcagctgg tatgctttct atcattttta aaataacagg tcctttatct gtcatttcga 420

caaatagtgg agcgcttgat ggtatacaat atgccaagga aatgatgcgt aacgataatc 480

tagactatgt gattcttgtt tctgctaatc agtggacaga catgagtttt atgtggtggc 540

aacaattaaa ctatgatagt caaatgtttg tcggttctga ttattgttca gcacaagtcc 600

tctctcgtca 610

<210> 623
<211> 606
<212> DNA
<213> Streptococcus agalactiae

<400> 623

agcgatatga tgctttcttt tctctttcaa cagactttaa ttttttatca gaagaagaaa 60

ttgaacgcat ctgttctatt gaaagagact tgttacgcca agaaaaattt gatgctgtat 120

tgacaggtta ccgtctatct attgttacaa gttgtcgttt agaaagcata ccattaattt 180

ggattatttc aggggcaacg catatcagtg aaattgttga aaactcagaa ggaatattgc 240

ctaatgggaa gataagtaaa gctagtaagc ctcaaacaaa ggattttatc aaaagagtaa 300

tcactactta ttcaacaaat gttaaaacgt ggaataacta tattaaaaaa tatggtggca 360

aacctttttaa taatgcttta gaattattta ctggtgatct aaacttggta acagattact 420

ctttgtttta tgaatttgat aaagattcgt cctataaaac gataggacct attttgatag 480

ataatgtagg tttttcaaaa tgcagccaaa ttaatcaaga caataagact gtactgctca 540

gctttggtac ttcatttaaa cgagattggg tggaatcttt tttaaagaca ttaccaaggc 600

attatc 606

<210> 624
<211> 511
<212> DNA
<213> Streptococcus agalactiae

<400> 624
aaaaataggc agtctacatt ggagaataat ttatctggcg atcggttgat gagatatcaa 60

caagcaaata gacaggtaag caaagataaa ctgttaacag ggagttattt tgtgtaccaa 120

tgcttaaaaa agttaggttt taccaataag atttgtcagg aatctttttc tagtgttagt 180

agttatttaa ttggtttgcc aaaggggaaa attagttact ctaattctgg tgactatcat 240

attctaacct atgctcccag tggttcaact ggggttgata ttgagaaata caaagataga 300

tcagaacaaa cctaccaaaa ctacctagga gaatcagtta gtagtgatat ggattctaaa 360

ttattatttt ataaggcatg gttacaaaaa gaaatttcct ataaatgtgg gaaatctata 420

gatattacct atcaaacaat gatagatggc tatatttatg gttatgcttt tgataatact 480

tttaaagtag aagcggttta cttaaaagaa t 511

<210> 625
<211> 231
<212> DNA
<213> Streptococcus agalactiae

<400> 625
agtaatggcc aattgttgcg gaataaccta attcttcaat taactcacga gttaaagctt 60

ctaggtgatt ttcattttct tcaatttccc cacctggaag aaaccaagca ccattaggtg 120

cctgtactaa aataatttta tcatgagttg gatttggaat aatagcatag acaccaaatc 180

gtgacctata gtttacatta tctatttttt caccgaaagt aggattagtc a 231

<210> 626
<211> 240
<212> DNA
<213> Streptococcus agalactiae

<400> 626
aatccctttg gcttgagaag gagttgcagt ttggttgcga ttattatttc gtccattacc 60

gtttcctcca cctcggtttc ctcctgattg tgtaggagga gtgtttggta aatcttggcc 120

attaaaggct ctgaaattat ttaaatctcc aaagaaatca tcaaagaaag gattgatgcc 180

accaggcgca tgtgaaacat gatttaaacc tgaaaaaagt ggattattag ggtcagtttt 240

<210> 627
<211> 400
<212> DNA
<213> Streptococcus agalactiae

<400> 627
ctattataaa gaacgagggc aaacactttt agacgttttg caaaccattt acgataaatt 60

tggctattac aacgagcgcc aattttctct tgagttagag ggtgctgagg ggcaagaacg 120

tattagtcgt attatggagg attttagaca ggacccaata ttacaagtag gtgagatgac 180

attggagaat tctattgatt tcaaggatgg ttataaggat tttccaaagc aaaattgttt 240

aaaatattat tttaatgagg gttcatggta tgctttaagg ccgtcaggga cggaacctaa 300

gataaaatgt tacctttata cgattggttg tacagaagca gatagtttat cgaaacttaa 360

tgcaattgag tcggcttgtc gtgctaaaat gaatagtact 400

<210> 628
<211> 628
<212> DNA
<213> Streptococcus agalactiae

<400> 628
ccctaaatca agccataaag gtgattatgg tagtgttctt ctgataggag gtttttatcc 60

ctatggaggt gctattataa tggcagcttt ggcctgtgtc aaaactggtg caggattagt 120

tactgtagca acccaaagtt gcaatatccc ctctttgcat agtcaactac cagaggtaat 180

ggcgtttgat agtgatgatt acaaatggtt ggaaaaatca attgttcaaa gtgatgttat 240

tgtaattggt cctggattag gagtatcaga atcatctcga aaaattttga accagaccat 300

ggagaagatt caatcacatc aaagtgtcat ccttgacgga tcagccttga ctctgttatc 360

agaaggtgcg tttccgcaaa caaaggctaa aaatttagtg ttgacacctc atcaaaaaga 420

atgggagcga ttgtcaggta tcgctgtatc gcaacagaca aaagaaaata cccaaaccgc 480

tcttaaatct ttcccaaag ggacgatttt agtcgctaag agttcgcata cgcgtatttt 540

tcaagattta gacgaaaaag aaattatagt aggaggtcct taccaggcga ctggagggat 600

gggggatact ttgtgtggta tgattgca 628

<210> 629
<211> 388
<212> DNA
<213> Streptococcus agalactiae

<400> 629
agttttatct attgacgatt taagcttgat tcatattaat aaaacgggac gcctgttagc 60

ttatcccttt gttgcagcag gtattttagc tgagaagtcg gaagaagtaa aaggaaaact 120

gcatcaagct ggccttttaa tcggtcatgc ttttcaagta cgtgatgata ttttagatgt 180

gactgctagt tttgaagaat tggggaagac accaaataaa gacattgtag cagaaaagac 240

aacttatcca aatttattgg gtttggataa gtcacaggaa atacttgatg atactttgaa 300

aaaagctcag gcaatttttc aaaatctaga gaaaaaagct aactttaatg ctagaaaaat 360

aatagatata atagagggat tacggttg 388

<210> 630
<211> 410
<212> DNA
<213> Streptococcus agalactiae

<400> 630
tgttcttaac catgctgttg aaacacaaca tgagttgtta cgcagattgg aagcttatgg 60

ggtaactcta actcaagcaa ctatttcacg tgatatgaat gaaattggca ttataaaagt 120

gccatcagca aaaggtcgct atatttacgg tttgtcaaat gaaaacgacc ctatctttac 180

aactgctgtg gcaaagccta ttaaaacaag tattttatca atatcagata agctactagg 240

tttagagcaa tttatcaata ttaatgtcat accaggtaac agtcaattaa ttaaaacctt 300

cataatgtca cattgtcaag aacatatttt tagtttgaca gctgacgata atagtctcct 360

tttgattgca aaatcagaag cagatgctga tcacattcgt caatcaatga 410

<210> 631
<211> 240
<212> DNA
<213> Streptococcus agalactiae

<400> 631
taatgaatga aggtgtggaa catatcattg caattcattt aacgcataca ctatcaggaa 60

ctattgaagc atcacgccag ggagctaata ttgctggtgc agatgttaca gttattgatt 120

ctacttttac agaccagtgt caaaaattcc aggttgtaga agctgcgaaa ttagctaaag 180

agggagctga tttagatacc atcttggctc gtgtggaaga agtacgccag aagtcagaat 240

<210> 632
<211> 240
<212> DNA
<213> Streptococcus agalactiae

<400> 632
aatgggcatt tctcttattg ttggcaatta acctttcctt cacagcagtg attgcaagtc 60

gcttaattca agtacgtgag cctaatacag gaaaaatttc gactggggta caagataaag 120

taaaagtagg tacttttacg accaataagt cgcaactgaa taagacaatt gcactttatt 180

taaaacaata tcaaactaag aagatgaatt ataagattta tgctgcttca tcttctatac 240

<210> 633
<211> 200
<212> DNA
<213> Streptococcus agalactiae

<400> 633
tcgaaacctt tctgaggtaa caaaggaggc tgatatcctt attgttgcga ttggtcaggg 60

gcactttgtt acaaaagact tcgttaaaga aggtgctgtg gtgattgatg ttggtatgaa 120

tcgcgatgaa aatggtaaat tgattggaga cgttgtattt gaacaagtgg cagaagttgc 180

tagtatgata acacctgttc 200

<210> 634
<211> 545
<212> DNA
<213> Streptococcus agalactiae

<400> 634
tgaatctgga atgtttgata agaaagatat ttttgttagt acagattcag aattgtacag 60

agagatttgt ttagaacgcg gtatttcagt ggtgatgaga aaaccggaac tttcaactga 120

tcaggcaact tcgtatgata tgttaaaaga ttttttatct gactatgaag ataatcagga 180

gtttgtgtta cttcaagtaa cttctccact aagaaaatca tggcatataa aggaagcaat 240

ggagtattat tcttcacatg atgttgacaa tgttgtaagt ttttctgaag ttgagaaaca 300

ccctagtctg tttacgacat tgtctgataa aggctatgct atagatatgg tgggagcaga 360

taaaggttat cgtcgccaag atttacaacc tttatactat ccgaacggcg ctatttttat 420

ttctaataaa gaaacttact taagggaaaa aagcttttc acctctagga catatgctta 480

tcaaatggca aaggaatttt cattagatgt tgatacgaga gatgatttta tccacgtcat 540

cggtc 545

<210> 635
<211> 557
<212> DNA
<213> Streptococcus agalactiae

<400> 635
ttattctttc gacgggtatg gcggtaatgg aagagatcca tcaagcggtg aatattttac 60

gtcagaatgg tacaaccgac atttctattt tacattgtac aacagagtac ccaacacctt 120

acccctctct aaatttaaac gttattcata ctttgaaaga tgaatttaaa gatttaacga 180

taggttattc ggatcattca attggatcag aagtacctat cgcagcagca gcaataggtg 240

cagaagttat tgaaaaacac tttactttag atactaatat ggaaggtccg gatcataaag 300

ccagtgcaac acctgatatt ttagctgctt tagttaaagg ggttcgcatt gttgaacaag 360

ccttaggtag atttgaaaaa atcccagatc cagtagaaga aaaaaataag attgttgctc 420

gtaaatcagt agttgcttta aaaccaatta aaaaaggcga tatttattca atagaaaata 480

ttacggtgaa gcgcccaggt aatggtattt ctcctatgaa ctggtatgat atcttgggac 540

aagaagcgca agatgat 557

<210> 636
<211> 532
<212> DNA
<213> Streptococcus agalactiae

<400> 636
gctgaatacg gaataatgaa gccattgatt caaagattat caaaagataa agaagtcaac 60

ttacaaatta ttgcaacagc aatgcatctg gaagaaaagt acggctatac ttatcgtcaa 120

attgaagaag acggttttga tattgcttat aaagttccct tacatcttta tgatactgac 180

agaagaactg tatctactgc aatggcgcat ttacaactag gattgaccaa aatttttgac 240

aaggaagact atgatctagt catcatttta ggggatcgtt atgaaatgtt accagttgtg 300

aatgtagcgt tgatttataa tgtcccagta tgccaccttc atggagggga gacatcatta 360

ggcaattttg atgagtatat tcgccatgca attactaaga tgagtcacct acacttagtc 420

tctacagagg attttcgtca acgtgtgatt cagatgggag aacaacctca atttgtaatt 480

aacacaggag ctctcggagt ggaaaatgct ctatcaattc ctcctctaac ca 532

<210> 637
<211> 507
<212> DNA
<213> Streptococcus agalactiae

<400> 637
agtcatgctg atgcgattgc tccggttatt gatcctcttg tgtatgattt cgtaggtttt 60

tttgatgata aagatattac ggagcatgat ggttatcctg ttcttggaaa actttatgat 120

gtgctacctt accttgaaga tggctcaata gatgcagtat ttattacaat aggtgataat 180

gctaaaagga aagaactatt tgaatatgta gcaaaggatt attatgactt tattattaac 240

atcattagtc ccaatgcttt agtattgaca ccagatagta tttgtggacg tggtatcttt 300

attggttttg ggcttttat aggttctaaa gtgaagctgt ttgataacaa tgttgttaat 360

acaggagcgc tcattgaaca tcatactgtt gtagaatcac actgtaatat agcacctaac 420

gctaccataa atggtctttg ttatattaga gaagaagttt atgtaggtag tgccagtgtt 480

attattcaaa ccttggatat ttcatcg 507

<210> 638
<211> 510
<212> DNA
<213> Streptococcus agalactiae

<400> 638
gcatgaccaa gaggaactaa tgaaacctaa catgcacatt ctgatgttag atgaatttgg 60

taatacagaa tttaatgtca taaaagaacg ttatcaaagt ctttttgatg cttatcgtca 120

gcttcgtaaa cgcgtattgg ataagcaaaa aaatgaacaa gagaataaat cacgtattga 180

aatgctagaa tttcaaatag cagaaattga gtctgtagcc cttaaatcag atgaagacca 240

aacgctactc aagcaacgtg ataaattaat gaatcataag aatattgcag atactttgac 300

aaatgcatat cttatgttag ataacgaaga gttttcaagt ttatcgaatg ttcgttctgc 360

aatgaatgac cttatggctt tagaagaatt tgatcgagaa tataaagatc tttccaccaa 420

tctttcagaa gcttactacg ttattgaaga agttactaaa cgtttaggtg acgttatcga 480

tgatttagat tttgacgctg gtttactaca 510

<210> 639
<211> 627
<212> DNA
<213> Streptococcus agalactiae

<400> 639
aataccttga aatgtgtcgt gattatgctc tcagccaagt tgacaaacaa cgtgatgatt 60

ttaaacgtct gggcgtttct gccgattggg aaaatcctta tattacacta acaccagatt 120

atgaagcaga tcaagtacgt gttttcggtg ctatggcaga taaaggatat atctatcgtg 180

gtgctaaacc agtgtattgg tcatggtcat cagagtctgc ccttgctgag gctgaaatcg 240

aatatcatga tattgattcg acatcactct actatgccaa taaagttaaa gatggtaagg 300

gaattcttga tacagatacc tatatcgtcg tttggacgac aacaccattt actgtaacag 360

cttcacgcgg tttaacagta ggaccagata tggagtatgt tgtagttgta ccagtaggta 420

gtgagcgtaa ataccttctt gcagaggttc ttgtagatag tctcgctgct aagtttggct 480

gggaaaactt tgaaattgtg actcatcaca ctggtaaaga acttaatcac attgttacag 540

aacatccatg ggatacagaa gtagaagagt tggttatcct tggagaccat gttacaacag 600

attctggtac aggtattgtc cacacgg 627

<210> 640
<211> 326
<212> DNA
<213> Streptococcus agalactiae

<400> 640
acatatgatg tatctatctg gaactctagt ggctggtgca ttgttatttt caccagctgt 60

attagaagta catgctgatc aagtgacaac tccacaagtg gtaaatcatg taaatagtaa 120

taatcaagcc cagcaaatgg ctcaaaagct tgatcaagat agcattcagt tgagaaatat 180

caaagataat gttcagggaa cagattatga aaaaccggtt aatgaggcta ttactagcgt 240

ggaaaaatta aagacttcat tgcgtgccaa ccctgagaca gtttatgatt tgaattctat 300

tggtagtcgt gtagaagcct taacag 326

<210> 641
<211> 210
<212> DNA
<213> Streptococcus agalactiae

<400> 641
tatacaaaat caaaacttga taaggaaatc tggaatacac gctttactag agataaaaaa 60

gtacttaacg tcaaagaatt taaagtttac aatactttaa ataaagcaat cacacatgct 120

gttggagttc agttgaatcc aaatgttacg gtacaacaag ttgatcaaga gattgtaaca 180

ttacaagcag cacttcaaac agcattaaaa 210

<210> 642
<211> 230
<212> DNA
<213> Streptococcus agalactiae

<400> 642
ggagcgcgtt tagtttacgc agtagatgta ggaacaaatc aattagtttg gaagttacgt 60

caggatcatc gtgttcgttc tatggaacaa tataatttta ggtatgccca aaaagaagat 120

ttcaaggagg gactgcctga atttgcatcg atagatgtct catttatctc tcttaatttg 180

attttaccag ctctaaaaga aattttagtg gatggtggac aagtagtggc 230

<210> 643
<211> 522
<212> DNA
<213> Streptococcus agalactiae

<400> 643
ctagggaatg gtctgcttgg attgataaag aaaatactgc tgataaatca cctattatcc 60

aacgtaccga acaaggccaa gtaagtctat ccagcgacaa aggctttaga ggtgctgtaa 120

cacaaaaagt gaacattgat cccactaaaa aatatgaggt caagtttgat attgaaacaa 180

gtaacaaggc tggacaagct ttccttcgta ttatggagaa aaaagataac aatacgcgac 240

tttggctttc tgagatgacc agcggtacta ctaacaaaca taccttaaca aagatatata 300

acccaaagtt agatgtctcc gaggtgacac ttgaacttta ttatgaaaaa ggaacaggtt 360

ctgttacttt tgataatata tcaatgaaag caaaaggccc taaagactca gagcatccac 420

aacccgtcac aacacaaatt gaaaaaagcg ttaatacggc tttaaacaaa aattacgttt 480

ttaataaagc tgactaccaa tacactctaa ccaatccgtc tc 522

<210> 644

<211> 586
<212> DNA
<213> Streptococcus agalactiae

<400> 644
tcccacttaa ctatgttgct cttggagatt ctctgaccga aggtgtgggc gatacaacct 60

ctcaaggtgg ttttgttcca ctgctatcag aatcactcca taatcgatac tcttaccaag 120

tgacttctgt taattatggt gtgtctggga atactagtca acaaatttta aaacgtatga 180

cgacagatcc tcaaatcgaa aaagatttag agaaagctga tttattgacg ctaactgttg 240

gtggtaatga tgtcttggct gttattcgta aagagctcag tcatttatca ctaaattcct 300

ttgagaaacc agcagaagca tataaggaac gtttgaaaga aatccttgca aaagcaagac 360

aagataatcc taaattgcct atttatgttt taggcattta taatcctttt tacctaaact 420

ttccacaatt aactaaaatg caaaccgtta ttgataattg gaataaagct acaaaagaag 480

tagttgatgc ttcagaaaat gtttattttg tcccaattaa tgaccgcctt tataagggaa 540

taaatggtaa agagggtatt acagagtcat caaatagtca ggcaag 586

<210> 645
<211> 511
<212> DNA
<213> Streptococcus pyogenes

<400> 645
tagctcatat tgtcgcaaag acaagtgttg ctattgcttt ggctggagca atgggtagca 60

gtttattagc taatagcaca acgtacgctg ttagtggcaa agaaaataaa aaaagcgatg 120

tcaaatatga aacgaccaaa gttatggaag ctaacgcaac ttcctctaaa gaagacaatc 180

atgtcatgca cacattagac ggctcaatga gtactgtctg ggaggaaaat tcacctggtg 240

gtggtgttgg tgaggtactt tcctacaagt ttgcgtcccc gatgcatatt gggagaattt 300

taattgttaa tggagacaca tctagcaagg agaattacta caagaaaaat agaattgcaa 360

aggctgatgt taaatactat aacgggaata aattggtcct ctttcaaaaa attgaattag 420

gcgacaccta cactaaaaaa ccgcatcaca ttgagattga taaaaaatta gatgttgatc 480

gtattgatat tgaggtaaca gaggtccatc a 511

<210> 646
<211> 300
<212> DNA
<213> Streptococcus pyogenes

<400> 646
ttaaatacgc taaagccctc ttgagggctt ttttagatac aattgacatc ttaaaatgga 60

taccagtttc tgtgaaacaa tctttgattg tgaacaaaca aagcataatt tagagtatta 120

aaatctggac cctgctatct atggtaagtc tttttgttat tgttaaagag gttaagcgga 180

atgttaatat gttttagcta aaaaatgtag tgaaaaatga gtacgtagac tattgtaata 240

gtaattccgt aaaattgttg aaaaagaaaa tgggaaatac cttgtcaaat taagcaccct 300

<210> 647
<211> 579
<212> DNA
<213> Streptococcus pyogenes

<400> 647
ccggttatgt taatggaaag agaaaatata ttaggcgaga aggtttcaaa actaagcagg 60

ctgcaaggga aaccttaatt agtttacaag ctgaacttga taaacctaaa tcaagtatga 120

catttggagc attgacagat caatggctaa aggaatatga aaaaaccgtt cagggcagta 180

cctacttaaa aacagaaaga aatattaata aacatatttt gccaaaactt gataaagtga 240

agattggaga catcaatcca ctacttatcc agcggcttac tgaagaatgg tgcaacgatt 300

taaaatatgg aggaaaaatt cttgggcttg ttaggaatat cttaaatcta gctgttagat 360

acggatatat caataacaat ccagctttgc caattacacc tccaaaaata aaaaggaaaa 420

gaaaaatgaa taataatttt tatacacttg atcaacttaa acaattcctt gaactagttg 480

aaaaaactga caacattgaa aaaatagcct tgtttagatt attagcattt actggaatac 540

gaaaagggga gcttctggca ctaacttggg atgatttga 579

<210> 648
<211> 507
<212> DNA
<213> Streptococcus pyogenes

<400> 648
gctatttggc cctgtgtagc aaaaaagtgc ctcatcatgt gcggagtaaa atgaacgtcg 60

caatttttat taattttttt aaataagcag tagatgtaat ggctaccgat tggttttcct 120

acaaaagatg gctttacttt ttcgtcgtct cctaaaaata ggaaatcagc cttatttaag 180

atgcgatcgt tgcacacggc tattttgata gaagtatcaa tagcttttt tagcagttgt 240

gatgtctcaa aatctaaata cacatatcgt tccgaataag ctgtctttag gcctccgcca 300

tcttttctac ctcttgtcct tgattcgtct atctttacga ccgcacaatc tttatcatta 360

aaagttatat tccctaattt tatgccagct acctcgcttc tacgcaatcc aagatatgtt 420

atcctaacca ttgcgtagtc ataatcatca agcatttttc tggcaacttt atcccaagct 480

ttaaattctt gcattgatct acgtttg 507

<210> 649
<211> 501
<212> DNA
<213> Streptococcus pyogenes

<400> 649
gctcacggtc actaataatc tctactgggc gtgcgatatg gctggcaatt tcttttgaaa 60

tatcttctgg atcctcgaaa ttagggtcat cagcagtgag aatgacggtg aggtttggat 120

gctgatgaat caccctacca aaatcagctc gtctgctctc gcctttattt cctggtgcac 180

ctaaaatcaa cattaatttg cctgtctgat gttcttccac aacgctgagt aatttttcta 240

agctgtcacc attatgggca taatcaacaa aaactttagc atgatttgtc atagtgagga 300

cttccatacg gcctgggacg cgagtcttag cgataccttt ttgaatatca gctaggctag 360

cacccaaacg aaggcaggca agtccagctg ccatagcatt ttcttggtta aaatggccaa 420

ttaattgaat gtcataatgg ccagctaatt gtcctttagc ttcaaaggag aaggcttggc 480

tagtggtgat ctggttgtca g 501

<210> 650
<211> 632
<212> DNA
<213> Streptococcus pyogenes

<400> 650
cccagttcaa ttagattacc ctgttgacca agcaaacgca gcaactgttc aggaagccca 60

gtctttcaaa caatctgttg aagcatctct tggtaaagaa aatgtcattg tcaatgttct 120

tgaaacagaa acatcaactc acgaagccca aggcttctat gctgagaccc cagaacaaca 180

agactacgat atcatttcat catggtgggg accagactac caagatccac ggacctacct 240

tgacatcatg agtccagtag gtggtggatc tgttatccca aaacttggaa tccaagcagg 300

tccaaataag gatgttgtgg cagctgcagg ccttgatact taccaaactc ttcttgatga 360

agcagcagca attacagacg acaacgatgc gcgctataaa gcttacgcaa aagcacaagc 420

ctaccttaca gataatgccg tagatattcc agttgtggca ttgggtggca ctccacgagt 480

tactaaagcc gttccattta gcgggggctt ctcttgggca gggtctaaag gtcctctagc 540

atataaagga atgaaacttc aagacaaacc tgtcacagca aaacaatacg aaaaagcaaa 600

agaaaaatgg atgaaagcaa aggctaagtc aa 632

<210> 651
<211> 534
<212> DNA
<213> Streptococcus pyogenes

<400> 651
tttgatggtg ttgggtatgg ggcacgtaat tctattttaa tctcagttat agcgacccta 60

attaatatca ccattggggt agtgttagga gccatatggg gagtttctaa agcatttgat 120

aaagttatga ttgaaattta taacattatc tcaaatatcc cttctatgct tattatcatt 180

gttttgacct attcattagg tgcaggattt tggaatttga ttctagcttt ctgtatcact 240

ggatggattg gtgtcgccta ctccatccgt gttcaaatct tgcgttaccg tgatttagaa 300

tacaaccttg ctagtcaaac tttgggaaca ccaatgtaca agattgctgt taagaacctc 360

ctgcctcaat tggtttcagt tatcatgact atgttgtcac aaatgctacc agtttatgta 420

tcttctgaga ccttcttatc cttctttggg attggtttac caaccaccac tccaagttta 480

ggacgtttga ttgctaatta ttcaagcaac ttaacaacaa atgcctacct cttt 534

<210> 652
<211> 340
<212> DNA
<213> Streptococcus pyogenes

<400> 652
tcgaagagat tttctatgat ccaagacacc cctatacatg gagtttgctg tctagcttac 60

cgcagttggc agatgaatct ggtgaacttt acgctattcc aggaacgcct ccatcacttt 120

attcaccaat tatcggagat gcctttgcac ttcgctcaga atatgctatg gttttagact 180

ttgaaaaagc acctccggcg attaacgtat ctgagactca ttgggccaaa acatggcttt 240

tacacccaga ggctccaaaa gttcaaaaac cagaagtcat tcaaggtttg catcaaaaaa 300

tcttaaggaa aatgtcacaa caggaggaag gaaatgtctg 340

<210> 653
<211> 542
<212> DNA
<213> Streptococcus pyogenes

<400> 653

caccagacaa cctttctttc aagaccttat caattatctc gaccagcatg atcacgttat 60

attacgagag atcaaaaaag cctttcctaa tgtgacaggt attgacaagg ccatcgaaag 120

ctatgttcaa gctggctata ttcgccgtga aaataagcgt tatggcatca atcttccttt 180

ggtgagttct gatcagcagc tggccttaga cactatgctt tttgtggaca cctgttcagc 240

tatgtatgaa aatattttag cggttgtttt tgagactcag ctaacaaacc aaaccaatcg 300

cgtgatgatc aaggaaaaga ccaacatcac gagagacgat ttgaccctgg ctaattattt 360

ttaccgtctc aaaagaggtg agaagccatc agctgagcag atggacttgt atgacctctt 420

gggggatgtg aatcaggaat atgcccttaa atatatgaca actttttgc ttaaattcac 480

gcgcaaagac tttgtgatgc aaaaacgtcc tgatatattt gtggaagctc tggttacact 540

tg 542

<210> 654
<211> 616
<212> DNA
<213> Streptococcus pyogenes

<400> 654
ttaattgcag tagcagcatc tattggtggt gtaggtattg ccttgttaac tgaaaattat 60

gtcaaaaaag acatgaaagc agctgctcgt ttaatcatta acaacattga aatgttagtg 120

atgtttttgt tacctgctct tactggggca attattttag caagacctct atattctgtt 180

ttttacggag ctagcgagga gcgtgccatt cacctctttg tggcggttct ctttcaaacc 240

ttgctactgg cgctttacac cctcttttca ccgatgcttc aagctctttt tgaaaatcga 300

aaagcgattt actactttgc ctatggtatc ttgattaagt tagttttaca gataccgctt 360

atttatttgc tacatgctta tggtccttta ctagcgacga cgattgcttt agtggtgccg 420

atttatttga tgtatcgacg cctatatcag gttactcatt ttaaccgcaa actgttgcaa 480

aaacgtttat tattaacctt aattgaaacc ttattaatgg gactggtcgt gtttgtggcc 540

aactggctat tgggctatgc ctttaaaccg acaggccgct tgaccagcct tctttacctc 600

ctcattattg gtggct 616

<210> 655
<211> 208
<212> DNA
<213> Streptococcus pyogenes

<400> 655

agcagtaatc tttggtactg ttttgggtca tgttctatgt gtcccaattc atgcaagatt 60

actttttttcc tgtctttttc agacaggttt ttattaacat agattattcg atgatcagga 120

taataaaatc ctgacctatc ccacattgtg tctgggaact caaatagttt tatgttgtac 180

tgattaagta tctcatctat cttcacca 208

<210> 656
<211> 230
<212> DNA
<213> Streptococcus pyogenes

<400> 656
ttatctgatt taggacattt atcaaatgaa gatggagcgg gagccatgat tagaagcctg 60

gggtacaata ccaaaaaaat atacctaggt catctgagta aagaaaataa catcaaagag 120

ttagcgcata tgacgatggt caatcaactg gctatggcag atttagcagt aggtacagac 180

tttacggtcc atgatacctc tccagatact gcttgtccat taactgatat 230

<210> 657
<211> 411
<212> DNA
<213> Streptococcus pyogenes

<400> 657
cacgagaagt tcatttcaat ctttatttaa ttgaactgat gagccttttt tagaaagtta 60

tcatgaaacg attacgtcca tatgtgaaag ggtacctaaa agaaagtatc ttaggtcctc 120

tttttaaatt attagaagct ttatttgaat tattagtccc tttgttaatt gctaacatga 180

ttgatatatc gattagtcaa cacaacagcc agggaatttt gagggttgtt ttaacattat 240

ttggtttagc aaccattggc ttattgcttt ccgttacagc ccagtatttt tcttcgaaag 300

cagctgttgg ttttacaaga caaatgacag atgatttgtt taaaaaaatc atgtttttga 360

gcaaggagga ccaagaccat cttggttatg ctagtctgtt atcacgattg a 411

<210> 658
<211> 660
<212> DNA
<213> Streptococcus pyogenes

<400> 658
aagaaatgga gcaaacaaac aaggagcttt tgaaatcaag aaaaataaaa gtcaagaaga 60

atataattat gaagtttatg ataacagaaa catacttcag gatggggaac ataaacttga 120

aataaaaaga gttgatggga caggtaaaac ttatcaaggt tttttgctttc agttaacgaa 180

aaattttccc actgctcaag gtgtaagtaa aaagctgtat aaaaaattga gtagtagtga 240

tgaagaaaca ctaaagcaat atgcctctaa atatacaagt aataggagag gagatactag 300

tggtaatctt aaaaagcaaa ttgctaaggt tctgacagaa ggttacccaa ctaacaaaag 360

tgattggtta aatggattga ctgaaaacga aaaaatagaa gtaacccagg atgcaatttg 420

gtattttaca gaaacgacag ttccggctga tagaagttat acgaatcgca acgtaaatag 480

tcaaaaaatg aaagaagtgt atcaaaagct aattgataca acagatatag ataaatatga 540

agatgtacaa tttgatttat ttgtgccaca agatacaaac ttacaggcag taattagtgt 600

agagcctgtt atcgaaagcc ttccttggac atcgttgaag ccaatagccc agaaggatat 660

<210> 659
<211> 410
<212> DNA
<213> Streptococcus pyogenes

<400> 659
aacaggttga tcagcatagg ccatgacatt ggtggcttgc atagcccaat gaatggcttt 60

tttgtcagct ggactaagat ttccaaagta agattgatgg ggaaaacgtc cgtaagaaac 120

caattcgtaa acagttatgc cgttagttgc ttcttgaact tgaggtaaaa gagctagttt 180

tttagcaacc tctttagttt ctaatgtggc aatgttttgc ccatttaaat atacaactcc 240

ctgttttggt ggtaataatc ttgtcagtgc ttttaataaa ctagacttcc cacagccatt 300

ggcgccaata atggtcgtaa ttttaccttc aggaatataa aacgataatt tatcgatgat 360

ggtacgctgt tcataggcaa ttgtgaggtc ttcagcacta attgttgtca 410

<210> 660
<211> 718
<212> DNA
<213> Streptococcus pyogenes

<400> 660
tcaacccata ccattgaaac tagcgccaga aactgcacaa agcggcaaaa ggtatcggta 60

atgatgaggt gtaaaatgtt tcataagatg aggaatgact aagccgataa aagaaatgct 120

tccagcaatg gctacagctg ctgatgataa aataagaacc aaaatcataa agactgcact 180

gatcaagttg gttttttgcc caagagcttt tgcctgagac tcacttagac taaggacggt 240

caggtgataa gataatagct gggctaaaca aagactaaga ataataagag gagcaatata 300

gccgatcatt tgccaattga ccccgacaag acctcctgct tgccagccga taacagcatt 360

tgccagatga tagtaattgg taataccttg acctaatgct gatagcagta tggaaaccat 420

agctcctgct aagacaaggc ggagctgatg gtagcctttg ccagattgat aagaaaggcc 480

aaagactaag gttgctgcca ggctagaccc taacaacgaa agcagaataa tgagggaata 540

gtgcaagtga ggtacaaacg cataagccag taccaaggct agtcctgctc cagcattaat 600

gcctaaaagg ccaggctcag cgataggatt acgtgtgatt gcttgcatga tagttccaga 660

aacagctaac gcagagccag ttaaggtagc accaaaaagt ctcggtaatc gtatagcg 718

<210> 661
<211> 574
<212> DNA
<213> Streptococcus pyogenes

<400> 661
gcaacgacga cataatcacc aatatagtct ggcaagactt cctgcgacaa tgacaggtaa 60

ccttgtttaa aaacttcagt cttcactttt tcaggagcat cataatggaa agcttgatgg 120

ataatctctc cgccacgtcc ccagtcttta ccaaaaaggt aaacgtcttt ttcataaagc 180

cccataatag taaaggttgc tttgtcacct gtaacggcct tgacttcttt ttcataagct 240

gctgttttag ttttccaatc ttttaaccac ttcttggctt tgtcttcttt gttaaagatg 300

cggccgaagt cagataacac ttgtaaataa tcacgtttgc ggtattcaat cgagataaca 360

ggcgcaattt ctgccaattg tttaatattt tcttctgtag agccaacaac aatgaggtca 420

ggcttaagcg ttgtaacggc ttctaaatca gttgcagcaa cttgctttgc tttttttaca 480

gtctttgcta agatggggtt tttcttgtca taagaagtaa ccccgactag attcatatct 540

aattttttga ggtaaccagt gtaagttgaa gcca 574

<210> 662
<211> 545
<212> DNA
<213> Streptococcus pyogenes

<400> 662
tctggatatt actgccaacc agatagactc gtcctactgt atctgcaaca agaagtagga 60

tcattccgat taaaatacta atgggtattg ttattttatg attactccct accaagtatg 120

tactaaagtg tccagctatt aagccgataa aactaatatt accaaccaaa agaacactca 180

aagcacctaa gccagctgct aagacaagta tcaaacgacg cttacggttt aaagggagtc 240

ctagcccaat agcagtatta tcagctaatc ccataatatt aaggaaatgg gcttgactat 300

aagtcaatag ccaaaaacac aataacaaag gagcgatgac actcagagta ggccagtcgt 360

ctcctattaa ttggccgcta agccaattga tgaccaaatc gactttgtag cgattaatat 420

gaccaacaag agcaaccatt agacttgaaa gcatggtagt aacagctaca ccagtaagaa 480

ttaaccgtgt aggatcaatt tgtccttgtt ttgtcaaaga tagccaataa acgctaaagg 540

ttgtt 545

<210> 663
<211> 647
<212> DNA
<213> Streptococcus pyogenes

<400> 663
cggtaatgtg cttatagatg gcttatcgca attaattcct attattcaaa aaacaaaatc 60

tcctatagaa gcggataaaa tggctactat ttatcattgg attaaccatt ctttttttccc 120

tatcatcgtt cgtggagaaa tgatggatat gactcgaggg cgttctatca gtcgttttaa 180

tgctcaatct catgttgctg gcattgaagc acttcgtgct attttacgta ttgctgacat 240

gtctgaagag cctcaccgtt tggcacttaa aacacgtata aaaacactcg tcacacaagg 300

gaatgttttt tacaatgtct atgataattt gaaaacctat cacgatatca aacttatgaa 360

agagctacta agtgatactt ctgttccagt ccaaaaactt gatagttacg tagctagttt 420

caatagtatg gataaattgg cactatataa taataaacac gattttgctt ttggcctatc 480

catgttttcg aatcgaactc aaaattatga agctatgaat aatgaaaatc ttcatggctg 540

gtttacttct gatggaatgt tttacctata caataacgat ttaggacact acagtgaaaa 600

ctattgggca acggtaaatc cctaccgctt acctggaacc acagaaa 647

<210> 664
<211> 585
<212> DNA
<213> Streptococcus pyogenes

<400> 664
cttactggtc ccaaaggtcc taaaggagac actggtctcc aaggtaaaac tggaggaact 60

ggtcctcggg gccctgctgg caagcctgga acgacagatt atgatcaact ccaaaataaa 120

ccagatctag gtgcgtttgc acaaaaagaa gaaactaata gtaaaatcac caaattagaa 180

tcaagcaaag cagataaaag cgctgtttac tcaaaagcag agtcaaaaat agagctagac 240

aaaaaattga gcttaacagg cggcatagtg acaggacaac tacagtttaa acctaataaa 300

agtggtatta aaccctcatc ttccgtagga ggagcgatta acattgatat gtctaaatcg 360

gaaggtgctg ctatggtgat gtatacaaat aaagatacta ctgatggacc attgatgatt 420

ttacgttctg acaaagatac gtttgatcag tcagctcaat ttgtggatta cagcggtaag 480

actaatgctg taaatattgt aatgcgccag ccaagcgcac ctaatttttc ctcggcactt 540

aatataacca gtgccaacga aggcggtagt gcgatgcaaa ttaga 585

<210> 665
<211> 537
<212> DNA
<213> Streptococcus pyogenes

<400> 665
aatctactga ctaacaagcc aaatattgat ggattagcga caaaagtcga gaccgctcag 60

aaactacaac aaaaagcaga taaagagacc gtctatacaa aagctgaatc gaagcaagag 120

cttgacaaga aattaaatct caaaggtggc gttatgacag gtcaactaaa atttaagcca 180

gccgccactg ttgcttattc ctcgtcaacg ggtggagcgg tcaatattga cttgtcgtct 240

accagaggtg ctggtgttgt tgtctattct gacaatgata ccagtgatgg gccgttaatg 300

agcttgcgga cgggtaaaga gacctttaat caatcggcgc tttttgtcga ctataagggg 360

acaacaaatg ccgttaatat tgcgatgcgt cacgcaacca cccccaattt ttcatcggcg 420

cttaatatta ctagcggcaa tgaaaatggt agtgcaatgc agctacgagg gtcagaaaaa 480

gcgctaggaa cgctaaaaat tactcatgag aacccaagta ttggagcgga ttatgat 537

<210> 666
<211> 516
<212> DNA
<213> Streptococcus pyogenes

<400> 666
tttcaacgta tgggttatgt caattatttt tcaagcaaag aattaaaaga taatgcttct 60

aaagtagata gtagtgtaac gacagaagca actagtgcta acaaagctgt ctatgagaag 120

tatattgatt ctcttggcaa tggctggcag gtaaaacgct tccccactag caaacaggtt 180

tatgcaattc gcaatattcc tatttacgaa cgtgtttgga actttttctc aaatctagtt 240

ggtattgatc acccttggaa gattcaggat aaagataatc caaaattagc taggtatatt 300

cgcctagaaa aagataaatc aggtggctgg tcacttgttg ggtcggggac aaaacataaa 360

tatctcctct atactaacgg aaaatttcct tatcttcacc aaaactttgt taccctaaac 420

ttaggaacat cttatccaac atacagcaat attcctgttc ttcaggttat ttcacaaggg 480

caaggacgaa cagctcttca agatgtgacc ttccca 516

<210> 667
<211> 604
<212> DNA
<213> Streptococcus pyogenes

<400> 667
tctcactagg caaacctatt atcgttttat taaaaataat cttgacattt cttcgaaaaa 60

gttactttat atcttagaca acttgaatgt caatgttgat gagtttctct ttattagtaa 120

taactttaaa caatataaag aatttattga tatggatacg gcaaaacatt attttgaatg 180

ccgaaacata gaaggtttaa atcatatcct tgattcttat aaagatagta agtcaacaaa 240

ggaaaagaac ctttttgcct tggtcaaggt gttattagca actcttactg aggaagactg 300

tctgacagag cggacttatt tgtcaaacta tcttattaat attgagactt ggagtcacta 360

tgagactgtg ctttttaata attgtatgtt tattttagag tcttgcttta ttgagatggt 420

gttttcaaaa gttattgtga acctcgataa atacaatacc ctaaggtatt atgggaatga 480

atcgattcgg atgtttgtca atatgttgat tttgtttatt cagcgacaag agtatgataa 540

agcttctgag attttggcaa aaattgaaga ttatcagcta aatgatgatt gcttatatga 600

acgg 604

<210> 668
<211> 522
<212> DNA
<213> Streptococcus pyogenes

<400> 668
cagacgatca gcaagataaa gaaatgcctg ttctttcaac aaaccgtttt gagccaaaca 60

aggcttacga ctatgcttat gctaatcgtg ggatgaaaga ggatgatttt aaggatgtca 120

aaggcaagat tgcccttatt gaacgtggcg atattgattt caaagataag gttgcaaacg 180

ctaaaaaagc tggtgctgta ggggtcttga tctatgacaa tcaggacaag ggcttcccga 240

ttgaattgcc aaatgttgat cagatgcctg cggcctttat cagtcgaaaa gacggtctct 300

tattaaaaga caatccccaa aaaaccatca ccttcaatgc gacacctaag gtattgccaa 360

cagcaagtgg caccaaacta agccgcttct caagctgggg tctgacagct gacggcaata 420

ttaagccaga tattgcagca cccggccaag atattttgtc atcagtggct aacaacaagt 480

atgccaaact ttctggaact agtatgtctg cgccattagt ag 522

<210> 669
<211> 554
<212> DNA
<213> Streptococcus pyogenes

<400> 669
cagaaaccac aacgacaagt gagcaaccaa aaccagaaag tagtgagcta actatcgaaa 60

aagcaggtca gaaaatggat gatatgctta actctaacga tatgattaag cttgctccca 120

aagaaatgcc actagaatct gcagaaaaag aagaaaaaaa gtcagaagac aaaaaaaaga 180

gcgaagaaga tcacactgaa gaaatcaatg acaagattta ttcactaaat tataatgagc 240

ttgaagtact tgctaaaaat ggtgaaacca ttgaaaattt tgttcctaaa gaaggcgtta 300

agaaagctga taaatttatt gtcattgaaa gaaagaaaaa aaatatcaac actacaccag 360

tcgatatttc cattattgac tctgtcactg ataggaccta tccagcagcc cttcagctgg 420

ctaataaagg ttttaccgaa aacaaaccag acgcggtagt caccaagcga aacccacaaa 480

aaatccatat tgatttacca ggtatgggag acaaagcaac ggttgaggtc aatgacccta 540

cctatgccaa tgtt 554

<210> 670
<211> 518
<212> DNA
<213> Streptococcus pyogenes

<400> 670
agtgactaag aaacttgatg ttagagatgc tagagatttt tttattaact ccgaaatgga 60

cgaatatgca gccaatgatt ttaaagatgg agataaaata gctgtgttct ccgtcccatt 120

tgattggaac tacttgtcag aaggaaaagt cacagcatat acgtacggcg gaataacacc 180

ctaccaaaaa acttcaatac ctaaaaatat ccctgttaat ttatggatta atggaaagca 240

gatctctgtt ccttacaacg aaatatcaac taacaaaaca acagttacag ctcaagaaat 300

tgatctaaag gttagaaaat ttttaatagc acaacatcaa ttatattctt ctggttctag 360

ctacaaaagt ggtaaattag tttttcatac aaatgataat tcagataaat attctttcga 420

tcttttctat acaggatata gagataaaga aagtattttt aaagtataca aagacaataa 480

atctttcaat atagataaaa ttgggcattt agatatag 518

<210> 671
<211> 612
<212> DNA
<213> Streptococcus pyogenes

<400> 671
ttatctgtag ggctcgtctc cgtcggaacg atgctgatag ccccgacagt tttaggacag 60

gaggttagtg ctagtagtag tacggagagc agtaccacta cagctaatac tggtaccggt 120

acggcaagtg ggatgactgc cactactcct agtgctacga cagatactgg tgaagcagct 180

gggagcggag ctaggagtga agctaatggt gcatcgtccg tagtatctag cgaagaaagt 240

cagagttcag gcactactcc agcctcaccc caagcacaga cagctccagc agcaacgtca 300

acatcatcgg tttcttctag taatgagaaa actcccaaga cagcaactac aactacatca 360

tcgactccag tagcaagtac cagtaataat agcaacaaag taactagtac tgaagctgaa 420

acacagacgg tggacgtgga acggtataca gttgataagg aaaattcaaa gctaaatatt 480

aaagacggta agactccaaa aactaggagt agtgttaata aagacacaaa acttattaga 540

aaccgcgatg acaaacagcg tgatatcgtt gatgttactc ggacagttga aactaacgaa 600

gatggcctat tg 612

<210> 672
<211> 500
<212> DNA
<213> Streptococcus pyogenes

<400> 672
gtactagaca tggccgaaaa agtgggaata agtttaccta gtagtctgaa gtcggcagtg 60

aaagtccttg gcttaactaa tagtgcaata ggttctattt tagggaaagg tttgacagag 120

taccttggtt tgacagaata tagttcagat aacttagatg gaggagggtt tgattatagt 180

aaacgtgtag gggaaggtta ctactaccac agtttatcag ataggaaata tgaaaataca 240

atgccccttg aagaagctat caggacggcc ttagcatcta attttcccaa actcacagat 300

aattggtttt tcgatatctt aaatagtttt gtcaataaag atacagttga gaaagctaaa 360

ttagacgtaa ttatgaaggt acttaatagt attttttaca aaaaagaata tcgctattac 420

aaccataacc tgtcagcaat agccgaagct aaaatggctc aacaagaggg cattaccttc 480

tattccgttg atgttactga 500

<210> 673
<211> 568

<212> DNA
<213> Streptococcus pyogenes

<400> 673
tccaagccaa cttcacagat ctagtttagt taaaaacctt caaaatatat attttcttta 60

tgagggtgac cctgttactc acgagaatgt gaaatctgtt gatcaacttt tatctcacga 120

tttaatatat aatgtttcag ggccaaatta tgataaatta aaaactgaac ttaagaacca 180

agagatggca actttattta aggataaaaa cgttgatatt tatggtgtag aatattacca 240

tctctgttat ttatgtgaaa atgcagaaag gagtgcatgt atctacggag gggtaacaaa 300

tcatgaaggg aatcatttag aaattcctaa aaagatagtc gttaaagtat caatcgatgg 360

tatccaaagc ctatcatttg atattgaaac aaataaaaaa atggtaactg ctcaagaatt 420

agactataaa gttagaaaat atcttacaga taataagcaa ctatatacta atggaccttc 480

taaatatgaa actggatata taaagttcat acctaagaat aaagaaagtt tttggtttga 540

ttttttccct gaaccagaat ttactcaa 568

<210> 674
<211> 597
<212> DNA
<213> Streptococcus pyogenes

<400> 674
agcattaggt ggatttgttc ttgctaaccc agtatttgcc gatcaaaact ttgctcgtaa 60

cgaaaaagaa gcaaaagata gcgctatcac atttatccaa aaatcagcag ctatcaaagc 120

aggtgcacga agcgcagaag atattaagct tgacaaagtt aacttaggtg gagaactttc 180

tggctctaat atgtatgttt acaatatttc tactggagga tttgttatcg tttcaggaga 240

taaacgttct ccagaaattc taggatactc taccagcgga tcatttgacg ctaacggtaa 300

agaaaacatt gcttccttca tggaaagtta tgtcgaacaa atcaaagaaa acaaaaaatt 360

agacactact tatgctggta ccgctgagat taaacaacca gttgttaaat ctctccttga 420

ttcaaaaggc attcattaca atcaaggtaa cccttacaac ctattgacac ctgttattga 480

aaaagtaaaa ccaggtgaac aatcttttgt aggtcaacat gcagctacag gatgtgttgc 540

tactgcaact gctcaaatta tgaaatatca taattaccct aacaaagggt tgaaaga 597

<210> 675
<211> 553
<212> DNA
<213> Streptococcus pyogenes

<400> 675
tcatactgat ttctacttat ttcacctatc atcaaagtga ctctaagaaa gacatttcga 60

atgttaaaag tgatttactt tatgcataca ctataactcc ttatgattat aaagattgca 120

gggtaaattt ttcaacgaca cacacattaa acattgatac tcaaaaatat agagggaaag 180

actattatat tagttccgaa atgtcttatg aggcctctca aaaatttaaa cgagatgatc 240

atgtagatgt ttttggatta ttttatattc ttaattctca caccggtgag tacatctatg 300

gaggaattac gcctgctcaa aataataaag taaatcataa attattggga aatctattta 360

tttcgggaga atctcaacag aacttaaata acaagattat tctagaaaag gatatcgtaa 420

ctttccagga aattgacttt aaaatcagaa aataccttat ggataattat aaaatttatg 480

acgctacttc tccttatgta agcggcagaa tcgaaattgg cacaaaagat gggaaacatg 540

agcaaataga ctt 553

<210> 676
<211> 504
<212> DNA
<213> Streptococcus pyogenes

<400> 676
ataatctttc atgggtacgg aagtgtaaaa tcagatagtg aaaatattaa agacgttaag 60

ctacaattaa attacgcata cgaaatcata ccagtagatt atacgaattg taatattgat 120

tacttgacta ctcatgattt ttatattgat atttccagtt ataaaaagaa aaatttttca 180

gttgattctg aggtcgagag ctatattaca acaaagttta cgaaaaatca aaaagtaaat 240

atttttggtc ttccgtacat atttactcgt tatgatgttt attatatata tggtggggtt 300

acaccatcag taaacagtaa ttcggaaaat agtaaaattg taggtaattt actaatagat 360

ggagtccagc aaaaaacact aataaatccc ataaaaatag ataaacctat ttttacgatt 420

caagaatttg acttcaaaat cagacaatat cttatgcaaa catacaaaat ttatgatcct 480

aattctccat acataaaagg gcaa 504

<210> 677
<211> 645
<212> DNA
<213> Streptococcus pyogenes

<400> 677
ttgctagtcc cagtctttat gatagtgtaa tagattttga taaatgtaat gaaaagaaaa 60

agcaaaatgt aaaagtctca ttaaatagtt attctaaaag agcagcgttt agaactactc 120

catttggtat ctttactgct attaatacag ttgatttgac aaagggaacc acttctaatg 180

tacaaaaggt tagttttatt aaaaaagcag tcccagatta ttcatggata tattctctag 240

taaaatcgta tgaaataagt aaccttgaaa aactttcatt aaaaataaat acagcggcgt 300

ttactcaagg tgacagatat gtactaccat ttacagtgaa tgaatcagag gaagatagaa 360

acataagttt ttcaaaacca attaagttac ttgtagaaaa atgtaaaact cgatatataa 420

aatatgaaga gttaatagat gtatttaaaa ataattatcc agatatagtg tcagacatgc 480

tagagtcata tatacacgac ttagttacaa atgatttttt aatttcagat ttaagaccac 540

caatttgtaa tatcaattcc ttagattatc tactatctaa attagaagaa ggaacactat 600

gtactgactt aactacttta aagaagatga ttgaagatta caacg 645

<210> 678
<211> 703
<212> DNA
<213> Streptococcus pyogenes

<400> 678
gatagtagct gaaagtgaga ataaagtact aattaatatt gaatctaaat atagaaatac 60

cttttttgat aaatctctga gtcatggtgt gccatcatta atcttaatgt atagttcact 120

atataaagtg acaaaagatg agagatatct aacattctcc aacatatacg ttgagaaatt 180

agtagacata atctctagag atggtataga atctccgtct ctctatgctg gcactgcagg 240

tattgcatta gctattaaag aagcgagtat atctggaaag tattatccga aattattatc 300

atccttaaat tgtcttctaa aagaacaaat taaagacaaa ttggtagtaa gtttttctaa 360

tattgagaaa ggaattattg agccatatga ttatgatatg gttaacggat ttagtggaat 420

aactaattac ttactccttg aacaagaatt tttttctgta gagttaaatc aaattggaaa 480

ttatcttttg aaatatattg agacaatttt aaataaggta actaattgtt ctgaagatag 540

agaagctgaa tttgatctag gaattgcaca tggaattact ggtcctatgc taatcctagc 600

aaaattaaaa tcagaaaaaa ttttgagtgt agaagtagga gatatactga ataaagctat 660

aaatttaatg tttttattta gaagggatga caaactatgg cct 703

<210> 679
<211> 593
<212> DNA
<213> Streptococcus pyogenes

<400> 679
ttaactgcgg aaacaacagt aaatcagtgg ggagttattt ggattaatgt tattattgct 60

gtaaattctg gtttgttaaa taaattagaa ttagattcta ataagtattc tgttttttta 120

tcaagggatg ttgatttaaa aaaggtagaa tatgccagag ttctattgat agctcttata 180

aatctaataa ttagtatgat tttaagctta atgcttattg taattagttt tgtcctacct 240

actccaagtc ttattagtat aggtaggata ctattaacta tcttgttaat ttggttgact 300

acactatggc aaatcccgtt tattttatgg ctatcaagaa aaattaatgt gtattttgct 360

atgattatta atattatatc tccactaatt attggtacaa gtttttctct cttaaataaa 420

tggtatttgt tcccttatga ttggtcgttg aagttgcttg agccaatgac aagaatgaga 480

ataaatagta taccttttgg agcggagttt gttccagact actcacagat ttttatatca 540

ttgttcctag gaattgcttt tttcatctta ctgaccaatc tatttgctat ctc 593

<210> 680
<211> 544
<212> DNA
<213> Streptococcus pyogenes

<400> 680
taatcggtcc aaatggtgct ggaaaatcaa ctattatgaa aattttgaca ggcttagtta 60

gtaagacaag tggttctatt atttttgaag gtagagaatg gtcacgtcgg gatctgcgaa 120

aaatcgggag tattattgaa gaaccaccac tttataaaaa tttgagtgct tacgataata 180

tgaaggtagt tacaacaatg cttggtgttt cagaaagcac tatacttcca ttattaaata 240

aagttggtct aggaaatatt gacaagagac cagtaaaaca attttctctt ggaatgaagc 300

aacggttagg tatagctatc tctttaataa attcacctaa actacttata ttagacgaac 360

ctactaatgg cttggaccca attggaattc aagaattaag ggaaattata gagtcattta 420

aatcagaagg aatgacaatt atgatttcaa gccatatact gtcagaagtt gaacatctag 480

ctgattttat tggatttatc tatgaaggaa agattattct ggaaaaagaa tatgacggct 540

ctga 544

<210> 681
<211> 548
<212> DNA
<213> Streptococcus pyogenes

<400> 681

```
ggaggtttac aaagcaggac tgtattattc tcctactttc aaatagtagg tgtacttctt      60

cctttgttg caagtattgt gtgcattcaa ctaaaaaatt tagaagaatc atctggaaaa      120

tataaatatt tattgggtta ctcacagtcg aattataaac catttattgt agaattagta     180

tttctatggt tatgctattg tatagtatta attatttcaa ttactatatt tattctttta     240

ttgaaaacta ttggtataaa tgtatctctc agactactta ttttgaatag tttaatttat     300

atcatttttg cctatgtaac ctatctgatc aatcatatta ttagctatat atttagtaca     360

ggtgtggcat taggtatttc aatggtaggt gttattgctg cagcattttg tgaaacgagc     420

cttggtgata aggtatggtt tcttattcca tgggcatggc ttttaagaat atcagatact     480

ctatataacc aacagaaaat ggcaattgtt ccacttattg ttatattttt tgtttcatgc     540

acagtagc                                                              548
```

```
<210>  682
<211>  311
<212>  DNA
<213>  Streptococcus pyogenes

<400>  682
aattagattt gaccattaca gagttgcagg accatattgc tcatctcaat aaggttgcgg      60

aggtcttgct taatctgaac aacaacgata tagagaaccg ccgtttggcc agatatgact     120

atgccaagat gaacttgact gcagctataa aaatagaaga agttgagaaa gagattgaaa     180

cttctcaaaa tgaacttaat atatccatag atgagtatga atatctagta agaaggttgg     240

aaaagtttgg agagatcttg agtgatagca aaattatcga tacttctcga aatgaaatac     300

aatgggagta a                                                          311
```

```
<210>  683
<211>  521
<212>  DNA
<213>  Streptococcus pyogenes

<400>  683
gtcgttgaaa ttgtctttgg agtttgtatc actgttttaa tgattgcgat aatatcgctt      60

tctttttcaa agttaaatat agtgacatct cataatgtgg gagaagaatt ttatattaaa     120

gataaacagt caatcaaaca gttgaacaat tatatgaaga cattgggatt agattatgtt     180

gtttttgata gaaaaacaga taaagctatg gaaggaaaat atttatctaa agaattttct     240

ttatttaacg aagttgcaga agaaaaaaat aatctgactt ttaattctgt acattatgat     300
```

ttatatacta atatcaatta taatattgtc ataagatata atgagatacc ggagttttct 360

aaccattacc ttagaaatgt ttcatataac atgttgacat tttatattct gggaatagga 420

acgagtatca gcattgtagt tgctttaaca cggtttgtaa aagaaatttc tttgaatttc 480

aaggaaatca agaagttagc aaataaaatg gggatagaag t 521

<210> 684
<211> 548
<212> DNA
<213> Streptococcus pyogenes

<400> 684
cttatgaaga ctgctttgga gattgaaaat tatcatgtta taacctgtca agagatagaa 60

ttaccaatag tttttgatga ttttaaagga tatgatttga tcttattgga tatcatgatg 120

cctaatataa gtggaactga gttttgttat aaaattcggg aagaagttca ttctccaatt 180

atttttgtta gcgctttaga tggcgataat gaaattgtcc aagctttaaa tatagggga 240

gacgatttta ttgtgaaacc atttagctta aaacaattcg tagctaaagt taactctcat 300

ttgaagagag aagagagagc aaagataaag aatgaggctg aggagagagt gaagcgcagt 360

tttccaccta tagaaatcta tctagaggaa cgtatgttat atattgataa acagccgtta 420

ttcctgactt atagagagta cgaaatttta gaattactgt cacgtcatcc gtataaagtt 480

ttcacaaaag aagagatata tgaacaagta tatagcgatg aagcttcagc attgtttcat 540

tctatttc 548

<210> 685
<211> 543
<212> DNA
<213> Streptococcus pyogenes

<400> 685
ttctccctac tggtgttctc aattgctatt agcttatttc aagggatttt acccattttt 60

agtatgctac tagttcaaaa aatgttaaac attataacga ctgatataaa aaattttcac 120

acattgatga ttgcttttat ctcatatatt gctttaacat tattgacaat tataatagga 180

gaagttgata gttatattga tactaaatta cagatacttc ttcactataa gatgaaccat 240

ttagttatgc agaaaactgt aaagttaaca ttggctgaat ttgagacacc agaaatctat 300

gatgatatca ctcgcataca aaatcaaata tcttataaac cttttcaaat atataagtca 360

attatttctg tattatcttc gttagtatca ttaatttcct catttgttat tttattaaat 420

tggaagatat caatttttcc acttttactt atccttccta tcgtttctat atatatctac 480

ttgaaaattg gtaaaaatga atttgagata ctatataaaa ggagtagcga tgagagagca 540

aat 543

<210> 686
<211> 512
<212> DNA
<213> Streptococcus pyogenes

<400> 686
agcgatcctt atcttacttg tttttgttgc tttttacttt atccatcttg cggtgcgtga 60

ttaccgaaat gcacgtatta ttcggatgat gagccataaa atccgagact tgattaatgg 120

tcgctatact gatataatcg acgaaaaagc agacattgag ttaatggagc tttcagacca 180

gttaaatgac ctgtcagatg tttttcgctt gacgcatgaa aatcttgccc aagaaaaaaa 240

tcgcttggca agtattttgg cttatatgtc agatggtgta cttgctacag accggtctgg 300

taaaatcatc atgattaacg agacagctcg caagcaatta aatttaagta aagaagaggc 360

actaaagaaa aacattacag atttgttaga aggtgatact tcatatacct accgtgattt 420

ggtatccaaa acaccagtgg taactgttaa tagccgaaat gatatgggtg agtttgtctc 480

attacgcttg cgctttgcgt tgaataggag ag 512

<210> 687
<211> 520
<212> DNA
<213> Streptococcus viridans

<400> 687
acgtcctctt aacagtcaca aggggacttt tggccgtgtc cttttgattg gcggcaacta 60

cccttacggt ggtgctatca tcatggctgc ccttgcttgt gtcaatagcg gagctggttt 120

ggtgacggtt gcgacccata aggacaatat cacagctctg cacagccatt tacccgaagc 180

tatggctttt gatatggttg aaaaagatcg tttgtcagag caaataacag cagcagatgt 240

ggttcttatg ggaccgggct tggcagaaga tgacttggct caaacaacct ttgatgtggt 300

ttggcaggct atcgaaccaa aacagacttt gattattgat ggctctgcta taaatctatt 360

agccaaaaga aaaccagcta tttggccaac caagcaaata atcctaacac cccatcaaaa 420

agaatgggaa agattgtctg gactgactat tccagaacag atagaagcag caacacaaac 480

agcactagct cattttccaa aagaaaccat cctagtcgca 520

<210> 688
<211> 463
<212> DNA
<213> Streptococcus viridans

<400> 688
atcaggctgt tatgcgtctg attagacaaa aggatgaaca agttaagaaa ctgcaaagat 60

cagttatttt cagacagcct gaaagactct atgatgctta tgttcaaaaa ttggatcatt 120

taagaacaca tttgttgacc aaggtgcggc aggtttatga tgtttatgat agcaaggaac 180

atttgctgag acaaagattg ttgtccttta atttatcagg gtgtattcag cgctatcaag 240

cacaattaaa acaagatcag cgtttattgt taagccacat gagcagtcaa tatgatagta 300

aattagcccg ttttgaaaaa gcacaagatg cgcttttgtc actggatacg actcggattg 360

tggcgcgtgg ctatgctatt gttcaaaaag ataatcacat tattcaatca acccaacaga 420

tcaaaaaagg agatcgcttg catcttgaaa tgaaagatgg gca 463

<210> 689
<211> 360
<212> DNA
<213> Streptococcus viridans

<400> 689
aattgtgaac cagttagaaa ccggtgaaat tcctcttgaa gaagctatta ctcaattcca 60

aaaaggaatg gcgctttcta aagatttgca gaaaaccttg gagtctgctg aaaagacctt 120

ggtcaaagtc atgcaggctg atggcagtga agcagaaatg gacgagttgt gaaagataag 180

attaaatcca ttaatcaggc tattaagcat tattatgcgc aaactcatgt gtctcaggat 240

ttgattgaag cggtcttgta ttctgttgat gcaggcggta aacggattcg tcctctctta 300

ctattggaaa tcttgcaagg ctttggtttg gtacttacag aagctcacta tcaggtggca 360

<210> 690
<211> 463
<212> DNA
<213> Streptococcus viridans

<400> 690
gaagaaacgt gaacgattag aattaattaa aaaaattgtt ttagaaaatg aaattgaaac 60

acaaaaagaa ttggtcaaac ttttagagaa cgaaggctta caagcaacgc aagcgacaat 120

ttcccgtgat attaatgagg tcggtatcat taaagtacca gcttcaaata gtcgctatat 180

ttatggcctt tctaaggaaa taagcaaaaa agaagagtca acaccaaaac cagctgaaaa 240

agcagttaag tttatttcag atcaggtggc aggtttagag catctcattc atattgatgt 300

tgttcctgga aatagctatt tattgaaacg ttttttacta gagagatttg aaggacttat 360

ttttagcttg ctggcagatg atgacagttt gcttttgatt gttaaaaatg ctaaagatag 420

tgatagaatt cgtcaagaaa tcaaatcttg gatggccaat taa 463

<210> 691
<211> 412
<212> DNA
<213> Streptococcus viridans

<400> 691
agatatgatt gcaacaattg aaaattttgc tcaagaacag gcagaatttc cggtttataa 60

tattttagga gaaatccata cctatggaga attaaaagct gattctgatt cgcttgcagc 120

tcatcttgat cagttagatt taacagcaaa atcaccagta gttgtctttg gaggacagga 180

atatgccatg ctggctagtt ttgttgctct gacaaaatca gggcatgcct atattcctat 240

tgatcatcat tcagccttag aacgtattga ggctatttta gaggtagcag agccaagttt 300

agttattgct gttgatgatt tcccaattga caatcttcaa gtcccagtaa ttcagtatag 360

tcaattagaa gagattttta aacaaaagct atcttatcaa atcaatcatg cg 412

<210> 692
<211> 560
<212> DNA
<213> Streptococcus viridans

<400> 692
gtgaaaagtc gcatcaaatc tttgccttgt ttttctatat catttggcaa attttctgtg 60

tctatagtta taaattttat agaaaatcac gggataataa gtggattttt tatcttcatg 120

tcttcatgtc tatcttacct ttatctttgg taaagattac tcctgcgatt tggacaaatc 180

aacaatcttt atttggtttt ttgggtatat cctatcttac ctttcgttca gtaggtatga 240

ttatggaaat gcgagacggt gttctcacgt catttacatt ttgggaattt atccgtttta 300

tgctgtttat gcccactttt tcaagtgggc ccattgatcg tttcagaaga tttaatgatg 360

attatgagaa gattcctgat aaagatgaat tgctagatat gttggaacaa tctgttcact 420

atatcatgct tggttttttc tataagtttg ttttagcgca aatattggga acaatgattt 480

taccgggttt gaaagaaatg gccttgcaaa aaggtggttg gttcaattgg ccgactttag 540

gagtcatgta tgtttatggc 560

<210> 693
<211> 250
<212> DNA
<213> Streptococcus viridans

<400> 693
cagctgttgc agaagattta gccaaaattg caggtgttga cttgcaggaa tatggtttgg 60

ctatgcttaa ggctggtacc aatttagcaa gtaaaacggc tgcacaactt gttgatattg 120

atgctaaaac atttgaactt aatggtagtc aagtacgtgt agctcaagtc aatacggttg 180

atatcaatga agttttggaa cgtcaaaatg aaattgaaga agccattaaa gcatcacaag 240

cagctaatgg 250

<210> 694
<211> 508
<212> DNA
<213> Streptococcus viridans

<400> 694
ttctcttaaa tcaaacagga agtatagcgg atcgttatgc agctaaacgt ttattagaca 60

ttaaaccgag ttcgaatttg caaggtatga taaaaaaaat tgcggctggt aaaaccttaa 120

atagctttga tagggcaagc ctgcgcctta ttaagagttt cttgaaaaaa gaagacgctt 180

tatttggaag tctgaccttt agtgataatt atgaacgtcg tgtattgccg catgtcaaaa 240

aattgcccaa gcacttttct tatggaacct taagtcaaat tgctagcaaa aatggtcaaa 300

ggttaacaaa aacaaatcaa tttgaaatta atgatcattt ttataataaa cgtattaaag 360

gacaattgaa aagactcaaa ggcttccaaa agcaactgtc ttatttacag tctccagaat 420

acaatgattt acagctggcg ttaactcaat tagcaaagtc aaagaccttt gtcatatttg 480

ttattccgcc ggttaatgcc aaatgggt 508

<210> 695
<211> 300
<212> DNA
<213> Streptococcus viridans

<400> 695
aattgttctc ttattggctt tctttggttt tcaacaaggt gttgatgcgc aaagcaaata 60

ccactatagt caagaactaa attactataa tggtaatgcc atggaacttc gtaatggttc 120

taatggtggt atgtttaact gtaattttgt ccctggaaat gtcggcttta ataacggctt 180

gatgagtctt aaaattgaca gtgatggtcg tggcggctac actgggggcg aatggcgtag 240

taaagaacgc tttggctatg gtcttttcca agtaaacatg aaacctatta aaaatccagg 300

<210> 696
<211> 266
<212> DNA
<213> Streptococcus viridans

<400> 696
gtcttggcgc gagttttaaa ccaattcaat gttttcttga tggtgtagct cgtgtttttg 60

gtactgacgg tcagttctcc atcttcaatg ctagcggcca caatgtctgg catcttaagg 120

acaatgcttc tatctgctaa agtcagtgtt aacagttcca tacctttctt ttctgtcgta 180

gctgtttcat ctattgtaga taagtgttgt attttcttaa ctttagccaa agctttatcc 240

acacgcccct gctcaaaagg cttcaa 266

<210> 697
<211> 400
<212> DNA
<213> Streptococcus viridans

<400> 697
cattggttcg atcagtcaga ccaacggcat caaaattagt atgctgctta atgatattac 60

acactttagt agctgattgc tgactcagtc cctgtcttaa ataaggaagg gtttgctgcg 120

tcaaatctaa aacatcccga gtctgaacag ctctcagctg tctttcattg gataagtagg 180

tcttgagaat agctagaaat aaggtcgaac ctagactgtt aagcaacatc ataggaatga 240

aaatcagttt aaccaaatcc cagccagtaa agaaaccgac aaagagcatt tgaatacttt 300

cagcaataat gctgataaca atgacctgcg aagtagatgg ataaaggtta ttagttttta 360

attgatcacc cagtcgacca ctaatatatc ctaccaaagc 400

<210> 698
<211> 381
<212> DNA
<213> Streptococcus viridans

<400> 698
tgattaaagg agttaagttg gtgaattgac ctgaaaaaat tgtttcaagt cccttaaatt 60

tcgttacatt taagttgtca aattccaagg caattttaga ataattcgtt ttaggcaata 120

aggtcttaat tttttccaaa ggattttcaa aatcaagata gccagtcacc gaaatatcta 180

atatactttt tgctcttaaa gcatcaagtt caggtaaaaa aagcagagtt tcttgatctg 240

caaagaggaa gaggaacata aggcgttcat gcggatcact ataaaaacct gttaaataat 300

taatggagac aggatctgaa aggacagcag cttcaatacc ttgctttttg agtttttgaa 360

caatctgtgc taattttgac a 381

<210> 699
<211> 505
<212> DNA
<213> Streptococcus viridans

<400> 699
agaaaaagtt gactacgaaa aagtaacagg acttgttaat tctacagaat cttttgggtc 60

tgtagacgga cctggtatac gctttgttgt ttttatgcaa gggtgccaaa tgcgttgtca 120

atattgccac aatcctgata cttgggcaat gaagaatgat agagcaacag aaaggactgc 180

aggagatgtc tttaaagaag ctttacgttt taaagatttt tggggagata caggaggtat 240

tactgtttct ggtggtgaag caacgctcca gatggatttt ttaattgccc tcttttcttt 300

agcaaaagaa aagggaattc atacgacctt ggatacctgt gctctgactt ttagaaacac 360

accaaaatat cttgaaaaat atgaaaagtt aatggctgtc actgatttag tattgttaga 420

tattaaagag attaatcctg accaacataa aattgtcact ggtcatagca ataaaactat 480

tttagcttgt gcgcgttatt tatct 505

<210> 700
<211> 407
<212> DNA
<213> Streptococcus viridans

<400> 700
tgatgctgag tacaaggatt tatccaataa tctcagcgaa tcttactata ttttagaaga 60

tgttagcaaa cgtctagaga ctatactgga tcatatggat tttgatgcca atactttggt 120

taaacttgaa gcacgtcttg atgttatcaa caccatcacg cgtaagtatg gtggttcagt 180

tgatgatgtt ttggcttatt ttgacaatat cagtaaggaa tacaatcatt tgacggtaaa 240

tgacctcgct tttgatgata tggaaagaga actaaaagtt ttggagcgct cactattaga 300

agcagcagct caattgagtc aaaaacgcca tgccattgcg gaaaccttgt ctcaggagat 360

taagcaggaa ctaaaagatc tctacatgga taaggctgat tttaaag 407

<210> 701
<211> 250

<212> DNA
<213> Streptococcus viridans

<400> 701
cggcagacaa gtcagtcatt actcagcctg ctacaaccct gacagctatt aaaaagattt 60

tagagagatt agaaattggc ggtcgtttgg caattatggt atattatggt catgagggtg 120

gcgataagga aaaatatgcg gttctgaact ttgttaaaga gctagatcaa cagcatttta 180

cagtcatgct ttatcaaccc ttaaatcaaa taaatacccc accctttttg gtgatgatag 240

agaaattata 250

<210> 702
<211> 213
<212> DNA
<213> Streptococcus viridans

<400> 702
gtgatattat ccaaaccatt ctcaatgaaa gattttcgcg gattcctgtt tacgatgatg 60

ataaagataa gattattgga atcattcata ctaaaaattt attgaatgct ggtttcaagg 120

aaggttttga tcacatcaat cttcgccgta ttttgcaaga gccgcttttt gtaccagaaa 180

ctattgttgt aaatgacctt ttgaccgctt taa 213

<210> 703
<211> 615
<212> DNA
<213> Streptococcus viridans

<400> 703
attggacttg tgtcagcttc gatttcaagc ctatttttg tgtccattgc gagcagtggg 60

atcgtatttg ctcaagaaaa tgcagctgtt cactacaaat atgtgacgga tacagagcta 120

agtagtcaag agaaggactt gattgtaaag ggcattccta aaattacgga agatagtgag 180

agcacctatt atctagtcta ccgtatggat gagaaagctc agctgggtca gttgcccaat 240

acaggtgggc agaatagcct tactagtgtt ttaactggtg gagtcctagc ttcgattggc 300

cttcttattt ttgtcgtatc gaaaaagaaa ggcaaaaaga aagcactgtt gaaagttgtc 360

ttgataacag gaatgggcag tggtttggct tcttcggttc atgctatcga aaatcaactt 420

ttgctccaat acaatcagga ataccaatta tctcaaggag atagtctgcc tttgccacgc 480

gccctgtcag gatatacct cctaggctat attaagcaag acaaagagat taatcagcaa 540

gaaactgctg ctagggatca gaaatttgac tacacggttc agcctcattt tcagaccaat 600

gaaggtagac aaagg 615

<210> 704
<211> 541
<212> DNA
<213> Streptococcus viridans

<400> 704
gaaggcaatg aggagactta ctatcttgtc tacaggttaa actcaaatgc tggatcaaaa 60

accttaccga atacaggcga cagtaacaat tccaatacta tgatgacggc tggtttgtta 120

acgacgatag gattggttgt ttttgttgtg tcgaaaagaa aggttaaaag caagttccta 180

ctgactgttt tggtgggggc tagtgtcggt ggaggtttga tactatccgt caatgcgctg 240

gaaaatggga tcttgctaca gtataatgcg gaatatcaag tgtcggctgg ggaaagtctg 300

ccgtcaccaa gtgaaatttc aggctatacc tatgttggct acattaaaga agaatcgatt 360

cagaaattat tagacaataa gattcttaac aatcagcaaa atgctaatct agataaagaa 420

actttaaacc aaaataagaa gctagattat tctctttctt ttgataagaa tgggctgaaa 480

aatcaaacgc ttggcgtcaa tacaattgag cctcaagatg aagtcttgtc tggccgagta 540

g 541

<210> 705
<211> 563
<212> DNA
<213> Streptococcus viridans

<400> 705
ttttattggg aggttttctt tattatatta ctaatcctat tgtcactttt ttagaaaacc 60

gttttaaaat taagcgtatt tgggggatca ctcttatttt tgctgtattg ctttccttgc 120

tggtttttttc tattaccagt ctgattccca atttgattaa tcagctaaca gatcttattt 180

cagccagcca aaatatttat gtgggtttgc aggatttatt caatgaatgg aaaagcaatc 240

ctgcctttaa aaatattgat atccctgttc ttttaaaaca gttcaattta tcttatgttg 300

atattttgac aaatgttttg gatagcgtga cagttagtgt ctcaagtatt gtttatatga 360

ttacaaatac ggtgatgatt ctggttctta cacccgttat tctttttttat ctcctcaagg 420

acaaagatgg tttaatgccc atgttagatc gtactatatt gaaaaatgat aggcataata 480

tcagtcaatt actgaatcaa atgaacaaaa ccatttctcg ttatattagt ggtgtagcta 540

ttgatgctgc cttcatattt gtt 563

<210> 706
<211> 500
<212> DNA
<213> Proteus mirabilis

<400> 706
tgaaaaagtt attattatct gcaattatta cttcagcaat ggccataatt gctacacctg 60

ccctagcaga agatactggt acaccagcac caacagaagt tacagttaat ggtggtacta 120

ttaactttga aggttctgtc gttaatgctg cttgtggtgt tgatagtagt tcaagtaacc 180

aaactgttcg tttgggtcaa ttccgtgtcg ctgaattcac taaaaaaggt gatgaaacag 240

gacgtattcc ttttagcatt aaattaaata actgcgatat tactgtttca tcattagcag 300

caattacctt taacggtaca gcttctgatg gtgatgcaac tgcattcgca ttacaaggca 360

gtggcgcagc aaccaatgta gcgttaaaaa ttaccgattc aagcagcaaa aatgttgttc 420

caggacaacc ttcttcaact caaaaattaa tcgaaggtga aaaccaatta aattataacg 480

cttctcttat ttccactgat 500

<210> 707
<211> 346
<212> DNA
<213> Proteus mirabilis

<400> 707
agatgaaaag cttgctaatg aaaatacact acaaattgcc atccagagtc ggataaagct 60

tttctaccgt cctagtggat tgtccgctta tactgaaaaa tatgccaatg aagtgacttt 120

ttcctataaa aatggggagt taattgccca taatccaaca ccttatcata ttactatggt 180

caatttagct gcagccgaca gtcaacttcc ttcaagtatt atgattaacc cattttcaca 240

attaacatta ggaaaagtta atcagaatgc taataccatt tcattccaaa ccattaatga 300

ttatggcgca cagactcctg ttttaaaaaa agaaatcgtt cattaa 346

<210> 708
<211> 563
<212> DNA
<213> Proteus mirabilis

<400> 708
tggctgactc tcctgatgcc gtcaccgatt taagttattt tgaagcaggc aaccgcatta 60

aacccggtga ttatcttctt gatattgttt ttaatcatga gtatctgcgt agtgaaaata 120

ttcattttat tagtcaagat aaccatgtta ttccttgttt aaatcgagat tattatcaat 180

```
cactcgggat caatattaaa ctatttgctg attttgagaa attctcggca aatgaatgta    240

ttgatattga aaaaatcatt ccagattctg ttgttaatta tgatattgag aaacaagctt    300

taaatattca agtccctcaa gccgcgttag atttgaaagc acgcggttat attccaccag    360

aaaaatggga taacggtata acagcaggta ttttaaacta cacctttagt ggcgctaata    420

gctggggaaa ttctcataat aatagctact acttaaatct acgtagtggg atcaatattg    480

gtgcttggcg attacgcgat tattccactt ggaattcgtc aaacgggaaa aaccaatgga    540

accatatcaa tacctatctg caa                                             563


<210>  709
<211>  527
<212>  DNA
<213>  Proteus mirabilis

<400>  709
atggataata agcgaacaca gcgggatatt atatttagca taatatggat tatttggtca     60

tgtgcattaa tggctttttg gcgatatcaa atagctggtg agcttttgat caccccttatc    120

ctaattttta gcattattat ttactctata actttgaggt taaaaaaaac ggcaatgttt    180

agtcgaaaaa cagaaacacc aaaagccgcg gagcctattg ctccagttat ggcagaagag    240

aagaagccta tgccggagca aaaattgtat accattattg ctaaaggcac tgtatttcaa    300

ggtgatatta acgttgatgg tgatattcaa atttggggta aaatttcagg gaatatcaat    360

gtaaaagatg gcgtgatccg tgttatgcat gcaggccaag ttgaagggga attgacggcg    420

ccagacatca ttattgatgg ttttgttaaa ggtatttgtg ccgcaaacaa tcttgatatt    480

ctagagcatg gtgaactacg tggcactagt cgttgtggca gtatgtc                   527


<210>  710
<211>  431
<212>  DNA
<213>  Proteus mirabilis

<400>  710
ttatattgaa acactgaagc aacggctgga tgcgattaat caactcaggc tggaacgtgc     60

atttgcatcg atgagtgatg tgtttaaaca ggtgtatggt ttaattcctg ttttactgca    120

ttaccaccac cctcagttgc caggctatat tcaaggaaat gtccctcatg gtacatgttt    180

ctttgaacct gatgacgtgc aacgtcaatg ggttaataag ctgactaatg catcatgtga    240

tgagccaatg aatggataca ccagcggaga gttacctatt acgggtatct attcgatggg    300
```

aagtacttcc tcgattgggc aaagtcactg ctccgatatt gatatttggg tctgtcacca 360

atcttggctg gaccaagatg agcgtgcgcg tttacaacgt aaatgtttac tgatagaaca 420

atgggcagga g 431

<210> 711
<211> 528
<212> DNA
<213> Proteus mirabilis

<400> 711
cgctattaac cttgctgaac gtggtatgag tgtcactatc ttagaaaagg gtcagattgc 60

cggtgagcaa tcaggccgtg catacagcca aattattagt taccaaacat cgccagaaat 120

cttcccatta caccattatg ggaaaatatt atggcgtggc atgaatgaga aaattggtgc 180

ggataccagt tatcgtactc aaggtcgtgt agaagcgctg gcagatgaaa aagcattaga 240

taaagctcaa gcgtggatca aaacagctaa agaagcggca ggttttgata caccattaaa 300

tactcgcatc attaaaggtg aagagctatc aaatcgctta gtcggtgctc aaacgccatg 360

gactgttgct gcatttgaag aagattcagg ctctgttgat cctgaaacag gcacacctgc 420

actcgctcgt tatgccaaac aaatcggtgt gaaaatttat accaactgtg cagtaagagg 480

tattgaaact gcgggtggta aaatctctga tgtggtgagt gagaaagg 528

<210> 712
<211> 409
<212> DNA
<213> Proteus mirabilis

<400> 712
ttgttgcaat acagccatca tgcttttaac ttgagagtta ataaatgtca catctgccag 60

atatttaacg ctattatcgg gtacgtacaa attactccgt tccatatcca tatcgaccgt 120

gttaccatcc atcgatgttt gatgaggaac ccgataaagc aaatcagcct ctaagcgata 180

acccggctta ataggaatat gccgttctga tgtcattgtt agttgcaatc catgactacc 240

agtacgcccg ttttccatgg ttttttttcaa ctcagctgcg aaatcaatat cccgagcttg 300

gaagcctggc gtatcagcat tagcaatatt tgccgccaaa atttcttggc gtttattacg 360

tagtgaaagc gcttcttgtt gaaaatgaaa cgtattttgt aatttatcg 409

<210> 713
<211> 513

<212> DNA
<213> Proteus mirabilis

<400> 713
aactttagcc ccactactat cagtaatatt gactgtaagc gtatctattg gactaaagga 60

ttcaaaacca aaggcgctgg cgaagatatt ttcattatca ggatctggcg tatcagcaga 120

tcttaataac ggatctaatt tagtatcagg cgttttatct gtatcgatat ctgtatctgc 180

atcagatcca gcgttttcac cattattact cttatcaacg tagatatcat taccggcaat 240

catcaccata tgattaacca atgaggtcgc acgtaatgcc tgactttggt caatttggcc 300

aacaatagta ttgactgttt tatttagcgt ctctatccct tcaaccgtag aaatctgtgc 360

taactgtgac gttaactcat tattctgcat tggattggtg ggatcttggt tttgcatctg 420

cgtgataagc aacgtcagga aattaccttt aatatcatca ctcccccctt ttttagtgtg 480

gtaggacgaa ggcgcttccc cgataatggt att 513

<210> 714
<211> 404
<212> DNA
<213> Proteus mirabilis

<400> 714
actccgccag accttagatc ttcagttatc acagctcaat accattgcgg gtattttacg 60

tgctgagcaa cagttattat gtgcaggaag tattgatatc aataagctgc atgaaataac 120

tgaacagaag aattttgtat taacagctct aggtcatacc gatcaaaaac gtcaaatact 180

cagtaaacaa gttggtattg atagacccta tcaaggacag cctttttttag ctgatttatg 240

ggggcaactg gttgatctaa cggaagagtt aaaacatctt aatcaacata atggcttatt 300

gttagagcaa catattactc gcaatagtga aacgctgcat tttctacaga aaaatcatag 360

cccaacactt tatggtgcag atggacaagc acagcgttca atat 404

<210> 715
<211> 236
<212> DNA
<213> Proteus mirabilis

<400> 715
gcgattctat ggctgatgca ctaaaagagc taacattgcc tcaattggtt aagttggctg 60

aaacaaacca actaatctgt aatttccggt ttgaagacag cgaaacaata gaacaactca 120

ctaaagaatc cagagtggat gatttgcaac aaattcatac tggtatcctt ctttcttcta 180

acttgttccg tcaactatcg gaacatgata cctctgctac aaagaaacgg gcataa 236

<210> 716
<211> 633
<212> DNA
<213> Proteus mirabilis

<400> 716
tctaatctta attcctctgt tcctattaac aagtttttac cttcaatatc aactttatca 60

tcatttaatt gtaatataac atgaccatgc ccctggattt taccaccaag agatatacta 120

tcatcagcga caatatgaaa aacactatta tacgacaatg atatattgtt tatttctagg 180

gttcctactc ttccatataa ataactatca tcaatattaa atgttctatc taaaatcaac 240

gtatccgctt tcacaaatag aatactatct ttaacattaa atgatgattc attaatataa 300

gaagaatatt cataaaccat tacttttgat tgtttcgtcc catcatgagc tgttctatat 360

aaattatcat cttgatttat atctatgtgt cctgtgttaa ttaagccata agactcatga 420

tttagtgaca aagtatttat attaccatca ttataaacgt taccctcttt tgcttttatt 480

attaaatatc gactatttat tcctgcctcg gcatttaatg aaaatagagc atttctatca 540

taatcatttt tagctccaag attaaactca cttaacccca tatcaaaacg aatatattca 600

gcatttaaat cacctttaat caagtctata tca 633

<210> 717
<211> 628
<212> DNA
<213> Proteus mirabilis

<400> 717
tctttactga gcttccatcc agccgatccg agttggtcac aaaccacgtg gaatgaacct 60

attcaaaact taggtggcaa tattggtgca tggcttgctg atatcctttt ttcagcattt 120

ggcttgctcg cttatgcaat ccctattgtg gtggtatttg gttgctggaa tgcattacgt 180

catcaaaaaa atcgtgaata cacagatttt ttctcccttg cattacgtac aattggtgcc 240

ttggctctgg ttcttacatc ttgtgcgtta gctgatctta attttgatga tatctacaat 300

tttagctctg gtggggtgat tggtagctta tttagcaagg cattgctacc ttggtttaat 360

atgctaggtg caacactggc gctactatcg gtatgggcga taggctttac gctatttact 420

ggctggtcat ggctgacgat taccgaaaag attggtgcgg ttatcttagg tgcggttgct 480

tttattacta atcgtggtca aaaagatatt gattatgatg attatgaaga acccgccgat 540

cctgctcagg cagatcccga ggcgttggtc gataacaaca cccagccaga acatcaactt 600

tctgcgcaaa tagagccaga tagtgatg 628

<210> 718
<211> 501
<212> DNA
<213> Proteus mirabilis

<400> 718
tattgagcgc attgatttac gcaccaaaaa aacagagtca gggaaagatt ttcttgccat 60

caaccctaaa gggcaagttc cggttcttca attagataat ggtgatattt taacggaggg 120

tgttgctatt gtgcagtatc ttgccgatct gaagccagat agaaatctta ttgccccacc 180

aaaagcatta gaacgttatc atcaaattga gtggctaaac tttcttgcca gtgaagttca 240

taaaggctac agccctctat tttcatctga tacgcctgaa agttatctcc ctgtggtaaa 300

aaacaaacta aaaagtaaat ttgtttatat taatgatgta ctaagcaaac aaaaatgtgt 360

ttgtggtgat cactttactg tggcggatgc gtatctgttt acgttaagtc aatgggcacc 420

tcatgtggcg ctagatttaa ccgacttaag ccatttacaa gactatctag cacgtattgc 480

acaacgtcct aatgtgcata g 501

<210> 719
<211> 301
<212> DNA
<213> Proteus mirabilis

<400> 719
tcatatcgct gtattacctt gatatacagc ggttaaaatc tctctagctc ctttatctag 60

tagctcttcg gcaagagaaa taccagcttg ctctgcatct tcaggtgata ctaagcgttc 120

gccacgtaaa atagttttac catcaggggc gccaactaat gctcgtagcc aaattttgtc 180

gttttgccaa attgcataac taccaatagg tacttggcac ccccccctcaa ggcgagtgtt 240

catcgcacgt tctgctttta cacaagttgc agtatctgcg tggttaaggg cggctaataa 300

g 301

<210> 720
<211> 507
<212> DNA
<213> Proteus mirabilis

<400> 720
agcgcaaact cttcagatac ataatcaata aatagacgct gataacattc acattcatca 60

```
acaattgcac cgcgttgacg taatgttgtg gcaagtagtt cgcgaccacc attgcctctt    120

agtagtagta ctcgcttgtt ttctatttgt tgaagtgaag acaaggccag taggtcttca    180

ctggtttctc caaattctgg ataacgtata gaatgtgctg ttaattgctg aaactcttcg    240

gcggtgcttt gacctattcc ataatagaat agcgtatctg gccacgattg ttgtaattga    300

tttagttgcc agtttgcgta ccacaccgca tttttagaaa gtaaaaaaag gtaatcaccc    360

gtacttagct tatttaattt gttttctaat atggaaagct ctttacccgc ggctatttct    420

attaaaggtg catgaaaagc atgctttccc gcatcaatta agcgttgcgt aagttgttct    480

cctgctgggc taggacgagt gattaaa                                        507

<210>  721
<211>  402
<212>  DNA
<213>  Proteus mirabilis

<400>  721
aatattggtc aagctgcaaa aaatccggta ttttcaagta aaatgatccg atattatgag     60

caaattggtt taatacctaa ggcaattcgt actgacggag gttatcgtga ttacaatgat    120

agcgatgtag attgttttcg ctttatcagc cattcacgtg ctcttggttt ttcaacagag    180

caaatatcaa cattattagt tttatggaat aacagagaac ggacaagtgc tgatgtaaaa    240

gctattgctc tttctcatat cgatgaatta aaccgtaaaa taacgcaatt gcaacgaatg    300

acgcaaacat tatcgcattt agcacaagag tgccaaggtg ataataatcc tgattgccca    360

attattgcta agctagtcga accccaaaca gggacagaac at                       402

<210>  722
<211>  300
<212>  DNA
<213>  Proteus mirabilis

<400>  722
aaatagtggt ggtgtgttcc aagagcaacc tgactttaaa gagccaccac tttctattga     60

aggtgcagcc gatcactgga accatcgtga agatgaagat tatttcagcc aacctcgtgc    120

actgtatgag ctattaagcg atgacgagca tcaacgtatg tttgcgcgta ttgcgggcga    180

attatcacaa gcaagtaaag aaacacaaca acgccaaatc gacttattta ccaaagttca    240

tcctgaatat ggcgctggtg ttgaaaaagc gattaaagtg ttagaaggga aagacgctaa    300
```

<210> 723
<211> 220
<212> DNA
<213> Proteus mirabilis

<400> 723
atgaaagcaa aaattgtact aggtgcggta attctggctt caggcctatt agcaggttgt 60

tcttctagca acaacgcaca attagaccaa atctcttctg atgtaaaccg tttaaatacg 120

caagttcaac aactaagtag tgatgttcaa tcagctaacg ctcaagcaaa agccgcttat 180

gaagcagctc gtgctaatca gcgtctagat aaccaagtaa 220

<210> 724
<211> 521
<212> DNA
<213> Proteus mirabilis

<400> 724
tgcacttgtt tacgagagat tttgatccct ccattcttta gctgttctgg taatagtaaa 60

caagcgatgg gacgttgaaa gcctgctaaa cgcgtatgat accattgtgg taattgatta 120

attgtctcaa tatcagtatc aacaacagca acgggacgtt gaccaaattc aatatcgtca 180

atcgggacaa taaatgtttg gcgaacatta gggtgactat ttagcacctt ttcaatatct 240

tctggctgta taccttcacc cgcactaaaa aacagattat ctaatcgccc taaaatgcac 300

cattcctctt ctttaaaaca acctctatcc cgtgttgcat accaagcatc ctgagtctgt 360

gataacggct ttaattgacc atcaaaccaa tatcctaatg caacactatc agatttgatc 420

tggatttcat tatccactaa tctgaccgct ttacccttta atggcgtacc aactcccgct 480

ttaccatctg cgcgttttgc acaaacagta gaggccattt c 521

<210> 725
<211> 273
<212> DNA
<213> Proteus mirabilis

<400> 725
cagacaatgc gtttattttg tgttcactaa aagcggtgag catatcgtcg ataaaagtga 60

gtcgtttttc tcgatcggtt agggtgatca taaatttcaa tttggtaggg ccatctaaac 120

ggaagatgct cggttgctct tgcaataaac cgattaaata agtcgggtcg acattatttt 180

tttcaccaaa ctcaataaag ccacctttgt catgggcttc aatgcgagat atacctaaac 240

tcatggcgct taatcgaatc gccgcattac gta 273

<210> 726
<211> 769
<212> DNA
<213> Proteus mirabilis

<400> 726
aaacaataga tactttgcca cttaactttc gtattttaat aaaattagcc ccactccctc 60

tgattagtgg cattattatg gcaataatct caacaatgct aagtttagca ccattatgga 120

tcatctataa aatcagccag atttgttttt caacatcacc taatattcaa caaataaata 180

atctagttta tatcactgtg attattttaa ttttacgttg gggattaatg gcaataagtc 240

atattgccgc acatcggggt gctttttata ttcagcatca attacaactc gcaatagcta 300

aaaaaatcag taaagtacca ttatcatttt ttgctcaata tggcagtgga aatctgcgac 360

gtattatcaa tgatgatata aaaagcttag aaggtttttt cgcacatatg ctacctgatc 420

tcgtctcagc catagtgact ccctttatcg ctattatatt acttttttat gtaaattggc 480

ctcttgcctt attatctcta accccattac ccattgcttt tatggctcaa cttctcatgt 540

tgcgtcgagc caataaacaa accaatgagt ggatgaatat tcagaaaaaa attgctaatg 600

aaataggaga atatattaaa ggaatacgag aaataaaagc gtttaactta acctcccata 660

cttttggtaa attatctcaa tctatcaatt cctctgttaa atggataaaa aataatgtca 720

aagctagtac aggctcttgg atggtattta gtgggatatt aacagcgaa 769

<210> 727
<211> 516
<212> DNA
<213> Proteus mirabilis

<400> 727
cttgccgtag ttgaaggtct tttgctact attccatata ttctactcta ttttttatta 60

attgatcttt ttgccaataa aatcacacta gctcagttat tttattactt tttatcaata 120

ctcttatcta ttgttctgcg tattgtcatt ggtacttata gtatgccaat gatttttatt 180

ggtgcttata aaatgatggg acaagcccgt ctaagaatag ccgatcattt acgaaaaatc 240

ccgattggct ggttttcttc tcaacgcagt ggtgatcttg catcacggct tactgctgat 300

ttagagatca ttcaaaatat ctggtcacat ttcttaggaa tgtttatcag tactttagcg 360

atgcctgttt ttctctcact attcttagta tgggtagatt ggcaactcac tttaattata 420

ttattttcta ttccaatcgc tctgttcgca ttatccataa gccataaaat aatgttaaaa 480

gctgcacaac aggcagctga tgctaatgcc aatgta 516

<210> 728
<211> 673
<212> DNA
<213> Proteus mirabilis

<400> 728
ttaagtaaag ctaaatccag aatgcacatc ttaaataacg atgaaatttc atcgttattc 60

gactaccctt ttataaaaca acgaaatatt tttttgctat caagagtcat gttacgcgat 120

attttatcat tttatttaaa aatttcacca gaagatgtaa gattttcaaa aaatgagtac 180

gggaaaccat ttattttaaa cgaatcaaag gaaagcattt acttcaattt atcacattca 240

aataattgtg ttgctctcgc tatttcaaat acatcatccg ttggtattga tattgaatat 300

ttcaaccgtg atatagaaat aaatagcatt atagattatt atttctcaaa aaaagaaaaa 360

aaatacctat cttattttga cgagactcaa aaaaaacata atttctataa gatgtggaca 420

ttaaaagaag cctatattaa atcaagaggc attggattat cagaagaaat cattaagaat 480

ttagattttt atataaagag agatcaattt gataaattat attttataga acagcattac 540

tctgctcatc tttcatatat taccaaatca atattagata gctataaaat atccataatc 600

acatatcacc atccatttaa ctataaattc ttaacatggg gtgatataaa aagcaacctg 660

ccacatcatt tat 673

<210> 729
<211> 682
<212> DNA
<213> Proteus mirabilis

<400> 729
attattctcg ccagtgtttc gacagaaaac gatcactttg atcaagagtt acctagtgac 60

accaagatac aacaaagttc acactaccaa tggcaattaa caccttgtgt ggaacaagat 120

cttatcaagc caacattaat atttaaccat caacaaacat tgccttctga aatcacagct 180

attttatccg ctattggatg tctttctgaa cagggcgaaa atcaattaat cgttgccaac 240

cttgcagatc ctttaattat cgccgagcag atccgccaaa tattactgtc atcgtctgat 300

gggtttgttg ttatcacgca acaagcctgg gcattaactg ccatagaaac ggttaatcca 360

gcacaacgta gtattcgaag tttattaaaa actattcaaa aagaatatag ctcaaggtta 420

attgccattg ttgatttagg tataaatgcc tcatggtctg aattagttcc tgcttttata 480

caaatagaac aaggtaataa tgaaattatt gttcgtaacc attgctgcta cttaccacaa 540

ttaaccccac tgccctcatc ttctacgatc atagcgcaga acatcatggt atccccgcgc 600

tggcatatta ttactggtgg ttttggaggc ttaggtcgaa ttacagcaag ttggttagta 660

aggcaaggtg ctaaacgtat cg 682

<210> 730
<211> 609
<212> DNA
<213> Proteus mirabilis

<400> 730
aatgtaaata aagacaatgc taacctattg gtttgcccat ttgctggtgc cagtaatagt 60

gcatttaact cgtggagatc taccgatatt tcagggttaa attgtcaatt agttaattac 120

tctggccatg gttgcagatt taaagaacca gcctttaatg atattgggtt attagccaat 180

gaattaataa caataataaa gaaattttat ccaccacggc ataattcatt attactttgc 240

ggtcacagta tgggggccca agttgccttt gaaactgcta ttcaattaga aaaaaatggc 300

tgggaattat ctggactaat attatcaggc tgccaagctc ctcatattca agcaaggaga 360

ttactgagtg atttaaatga tgatgacttt attcaacaat taattgccat tggtggatgt 420

gatgctgaat taatcaagca gccacagttg ttaaaacagt ttatgccatt attacgtgct 480

gatttccttg ctaccgagcg ttattttttt caaaaaagca ctaaacggct ttttcatacc 540

cctgttttat taatgtatgg tagtcatgat agtgaagctg ataaaaacga agttgaagca 600

tggcaagat 609

<210> 731
<211> 609
<212> DNA
<213> Proteus mirabilis

<400> 731
taaagcattc ggtattccac tttttactcg atttgatcaa ctacctgaaa aaatagatct 60

agcttgtatt gttgtgcgat cagccattgt tggtggcgaa ggtagccaac ttgcgcaagc 120

atttttacaa cgggggatct cggttgtaca ggaacatcct gtacatcctg atgaaattac 180

cagactacaa tcattagcag aaaaaatgca ttgccactat atcgttaaca gcctctatcc 240

acataataaa gcaggacgtt tatggataga aaacacacag aagatatatc agcaaataca 300

acaacgacca gtgtggggac aaattatcac aagcaggcaa ttaatttatt ccgccttaga 360

tatatattgc caagcaatga aattacaccc taatgatatt acagtcacat tagaaaaaga 420

taatacccccg ctacaatttc tacgactatc caaccctact ggtgatttgc ttttatgcct 480

acaaaaacat ttgtcatcta acgatcctga tcagcatagc ctcgtgatgc atcatatgat 540

attaggctgg ccagctggtt atttaactct cgctggaagt tatgggccag tagaatggaa 600

taatgcgct 609

<210> 732
<211> 502
<212> DNA
<213> Proteus mirabilis

<400> 732
aattggctac tcctcgatta cgtttacgag aatggcgtga aagtgataaa gcgccatttt 60

ttttacatat taacgcctcc gcatcggtga tgcgttattt cccttcacca cttactcgtg 120

cagaaagcga tgcaatggtt gatacattgc gtgataaatt tattcagcaa aatggttggg 180

gattttgggc cgttgaatta aaagagactc aagagcttat tggctttgtt ggattaaata 240

ttcctaatgc ccctttgcct tttaatccgt gtgttgaaat aggttggcgt attgcacaat 300

ctcattggcg caaagggtac acttatgagg cggctttaac agtattaaaa tatgcttttg 360

aacagttgaa actggaagaa gtcgtggcat ttaccgcagt gactaattta ccctcagaag 420

gggtgatgaa aaaactcggt atgaagaagt ctgaatattt tatgcatcca tctctagata 480

aaacacaccc tttagcacaa ca 502

<210> 733
<211> 511
<212> DNA
<213> Proteus mirabilis

<400> 733
tgcggcttta gtatttggta ttaattctgt tgctacagct gaaaatgaaa cgcctgcacc 60

aaaagtaagt tcaactaaag gcgaaattca attaaaaggt gaaattgtta attcagcatg 120

tggattagca gcatcttcaa gccctgtaat tgttgatttc agtgaaattc caacttctgc 180

attagcaaat ctgcaaaaag caggaaatat caaaaaagat attgaattac aagactgtga 240

tacaactgta gcgaaaactg ccacagttag ctatacacca agtgttgtta acgctgtaaa 300

taaagattta gcctcttttg tttctggtaa cgcatctggc gcaggtattg gcttaatgga 360

tgcaggtagt aaagcagtta aatggaatac tgcaactaca ccagtacaat taattaacgg 420

tgtatctaaa atcccattcg ttgcttatgt tcaagctgaa tcagctgacg ctaaagtaac 480

gccaggtgaa ttccaagccg ttatcaactt c 511

<210> 734
<211> 726
<212> DNA
<213> Proteus mirabilis

<400> 734
tttctcacaa gcagagcagg acgattctgt ggaatttaac attcatatgc tagacgcgga 60

agatcgcgat aatgtcgacc tttcacgttt ttctacctca aattatatca ttccgggtat 120

gtactattta gatattcgtc taaatggtcg cgactttcct cgccaaaata ttaattatat 180

tgaagtagca gataatcatt ccgtggcttg tatcgaccct actcttttaa aaaagttaac 240

aatcaaccaa gaaaaccaaa aatatatcaa acaaatatca ccagattgtt ttgatattag 300

ccaattaccc ggtatctcga ttaaaaatga tggtggtgta cttgatatca cgttaccgcg 360

ctcattaatg aaatatgaag aatctgattg gacacctccg gagctttggg atagcggggt 420

ctctgggctt atttttgatt atacactaac aggaacgtca actcgcccta ataaaggcaa 480

taataacaat acgttaactg gttatggtca agcgggatta aacttgggtg aatggcgttt 540

acgagctgaa tatcaaggca attattcttc tgaatattca tctaacaatc gttttgattg 600

gaaccaaatt tatgcctata agccattacc tgatctcgca gctaaattaa cggttgggga 660

aacttattta aactctcaaa tttttgatag tttccgtttt acaggagcca atttacaaag 720

cgatga 726

<210> 735
<211> 568
<212> DNA
<213> Proteus mirabilis

<400> 735
atgccgtatt agatcacacc acctttccta ataacaaagc gggagaatta gcaacagtaa 60

acttttcgtt gcctgatcgc tatgatggca cggtatattg tcctaactca cgtatttatg 120

atcgtgcatt aacctatttt aaagcaacca ctgatttacc tcctgttggt aataactttt 180

atcaattaaa tgagtatgtt gatatcaaaa ttaattttga aatttggggg cctaatcctt 240

tacccacagt gccctttttct gacataccta ataatagaaa taaccaacaa ggttgcagag 300

taccctcttc acctaaaccg catatttcct caggaagtag cggtcaactc actttccgtt 360

taagaaaacc cattattaat ggtgtcagtc ttaatgggca atctcttgca caaatgtatg 420

ccatggtaag tcacagcggt gcgccaaaaa cctatggttc agagcccatt tctaaattag 480

tgatcacctc ggggatcatt accactaaag ataaatgtat ttttaataat ggttcaccaa 540

ttacctttga ctttggtaat gtgggaaa 568

<210> 736
<211> 544
<212> DNA
<213> Proteus mirabilis

<400> 736
aacaggcaca ttaacagagg gtaaacctca agtcactgat gtcatagcta atgtaggctt 60

taatgagaaa gagctactga tgttggcttc ttctgtagaa gttggctctc atcaccctct 120

tgcaaaagcc attattaata aagcacaaga gcaacaaatt gatgttgtgg aagccgataa 180

tcgcaaggct ttagcgggta aaggtattga aggttattta aataatcagc atattctggt 240

cagtgcccca acacaattat cagaaaccat accattatct gcacaatggc aacaacaagt 300

cgctcgtctt gaagatgaag gcaaaaccgt tgtggtggta ttaaaagaag atcagttcat 360

tggtgtgatt gcgatgcaag atacattgcg caacgatgct atcgaatcaa tgaaagagaa 420

gaaagtgttg aaatcgatga atatcaatgc cgtgatgtta accggtgata acccaagagc 480

agcggctgcg attgcacaaa aactgggtat ggatttccgt gcaggattgc tccctgaaga 540

taaa 544

<210> 737
<211> 641
<212> DNA
<213> Proteus mirabilis

<400> 737
gcacactgac ccaattaaag ccaaatacat taactcgctt atatgctctg tttcttctgt 60

ttatggccat atcccttttt ctatatgctt atagctattt tgatacttgg ctagaaagta 120

aaaaaaatgc cattaacaac acgactaata agtttgcatc tcaagttgaa gattaccgct 180

atcacgctaa ccaactattc cagttatcaa acaaaattaa tgatccaacc ctctttctgc 240

ctttaaaaat caatccggtc aaactacgct ctgatgttta ttggcttgaa ggacgcgatc 300

agaccgttga tgctattgtt tttggtaaat cgaatgaaca aacctttcag ttagccggtt 360

attttgcaaa cgcgttagaa attatttggg gggtacgtaa taactatagc tctctctatt 420

atcttaatgg taaaggcaat gatcttatcc ttattactac ccactcaata ctaaaaccag 480

aattgcgtta taaagaaagc tatttaacac taacggctga aaacaaacgt tctgagctat 540

taatgcaatc aacggcatta gatgaaaaag agagcctttc tcccattagg aaaatgccga 600

cagaaaacat ttattactat acctatcgca ccatgtttaa t 641

<210> 738
<211> 699
<212> DNA
<213> Proteus mirabilis

<400> 738
tggcttggaa acacaatcat tcattcccgc atcaatacaa cgttgttttt cttcggcaat 60

cgcatttgct gtaacgccaa taataggaat agtgctactc aattcacgca ctgttgtcgc 120

taattgatag ccattcatat ttggcatatt gacatcggtt aaaataatat cgacatgatt 180

ttcttgcata aaggctaaag catcacagcc atcttctgcc gttgcggtat taaaaccaat 240

ttttttcagt tgatcggtca acaataaacg attgataggg tgatcatcaa caatgagcac 300

cgtcaataat tgtagatcgt gatctgtcat taacgcgtta ttttctgagt catcagactc 360

taattttgtt tgtggtaatt gtaggataat cttaattaat tcatttaatt tatatgtact 420

gcataaccaa ttattttcag agattttctt tgctggctca aaatagtgtt cataaatacg 480

gataaattgg caagagttat ctaaacattc atcatgatcg gtgataataa aatcattctc 540

agatacctga gtcacttccg tgaataattg acaatgtaag cccacataac ttagatatcg 600

ttcaacaaag ctttctagat agagattttt aatactgata aagcagcgaa tagtactctc 660

tttatagaga ttatatttgg tttgtccatc actcgaatt 699

<210> 739
<211> 341
<212> DNA
<213> Proteus mirabilis

<400> 739
cgagcatgac actaataatg gctttactgt cttggatgct gcacaagtta atgatcgtgg 60

tgttgatgat ttagtcgcgc aaattaaaga gattgtgggt tcacttcctg tttatttgac 120

ttttgatatt gattgccttg atcccgcatt tgcaccgggt acaggaacac cggttgtggg 180

gggattaacc acggataagg cgctgaaaat gctgcgtgct ttacagccgt taaatattgt 240

aggcatggac ttagttgaag tatcgccagc gtatgatcaa tcagatatta ccgcccttgc 300

cggagcaacc attgcacttg atatgctata tctgcaagcg g 341

<210> 740
<211> 323
<212> DNA
<213> Proteus mirabilis

<400> 740
tacgtacatc gccaccagcg aaaactgcat attgccatta atacttttgc tcatcctgat 60

ggatttgaac gctggcaaaa agccattgat atggcggctc atttaggtgc cgatgcatta 120

attttggccg atattgctat gctagagtac gcagctgaac gctatccaca gatagagcgt 180

catgtatcgg tacaggcgtc ggccactaat actcaggcaa tcgcatttta tcaacgcaat 240

tttgatgttg cacgtattgt actaccacgc gttctttcta ttcatcaagt caaacaattg 300

gctcaaagta gtcctgttcc ttt 323

<210> 741
<211> 360
<212> DNA
<213> Proteus mirabilis

<400> 741
gaaatacgca ttaggctctg tactttatta ttggcaaaaa gaaacacttg agacatttta 60

tcggcaagca aaacagagcg atgctgatat tatctactta ggcgaaacag tctgtagtaa 120

gcgccgtgag actaaaccac aagattggat taatctggcc aaagaagtgg ctaaaagtgg 180

taaacaagtg atcctttcta ccttagcact actacaagcg ccttctgaac taaaagagat 240

agcaaagctg gtggataacg gtgaattttt agttgaggct catgattttg gtgtgatcaa 300

tatgctttat gagcgtcatt taccttttgt agtaggccat ggattaaact gctataacgc 360

<210> 742
<211> 516
<212> DNA
<213> Proteus mirabilis

<400> 742
caaggtttcg ctaactaaag agaaaccggc aattagctta actaaaaagg atgatttcgg 60

caaaatccgc attaacctcg attggcatcg agaaagtaaa agcggtggtt ccgggttatt 120

aggtggatta tttggtggta acaaaggtat tgatttagat attggcgcct ttgttgaact 180

acaagatggt tataagtcag tgatccaagc cttaggaaat ggattcggtg attttaatcg 240

catgccttat gttgagttac aaggtgatga tcgcactggt gatgtagcgg gtggcgagtg 300

gatttttatc aatggacgtg aatggaaaaa tatcaagcaa gtgcttattt ttacttttat 360

ttatgaaggg gttcctaact ggagtaaaac agatggtgtg gtcactattc atgttcccga 420

gcaaccacct atcgaaacac gtttaacgga tggtaataat ggtcgagcta tgtgtgccat 480

tgcacgactt attaatgaaa acggatcaat caaagt 516

<210> 743
<211> 516
<212> DNA
<213> Proteus mirabilis

<400> 743
ttctaaaggt ggtaatgttt ctttaagcaa agcagcccca acgatgaaaa acgtcctagt 60

cggacttggt tgggatgccc gttctacaga tggtcaagat tttgacttag atgcatctgc 120

atttctgtta gccgctaatg gaaaagtacg tagcgatgcc gatttcattt tttataacaa 180

cttaagatct tccgacggct ctgttgttca cactggtgat aaccgaacag gtgaaggtga 240

tggtgatgat gaagcactaa aaatcaaact agataccatc cccagttatg tcgaaaaaat 300

tatctttgta gtgactatcc atgaagcgca accgcgtcgt caaagctttg gtcaggtatc 360

tggtgcgttt attcgtttag ttaatgatga caaccaaatt gaagttgctc gttatgattt 420

aacggaagat gcatcaacgg aaacggcgat gttatttggt gagttatatc gtcataacgg 480

tgagtggaaa ttccgtgctg taggccaagg atatgc 516

<210> 744
<211> 500
<212> DNA
<213> Proteus mirabilis

<400> 744
gagccttgtt tatccctctt tcattccctt tactcgcctt atcttgctac tgttgggcag 60

gaaatggtct ggtggataga acatggacag cttcaggaat ggatagctat agttatcgcc 120

aagcgctaag acagccaacg gttggctcac gttatactct ttttaatatt acacccgata 180

tgccaacgcc aggtggcacg agtcctgttg gtactaaagg aattcgctat attgcgatga 240

aatatggccc ttatggacaa cctgaacact ataaaaccta ccaagtgatg ttctctcact 300

attccaccac cactacacgt aaagttcgtt atttaggtga gttatatacc gttgtcggtg 360

atatttattt aatcgatcct gctgctacca ccaatgaatg gcaacgcggt cgtagccaaa 420

tagttgaaga gtattatgag attttagata cacatggaaa taggacaggc aaaggattgc 480

gttttaaccg ctgggataga 500

<210> 745
<211> 550
<212> DNA
<213> Proteus mirabilis

<400> 745
gctcatatca tcttccatcc ctcgccaaac cgacttaccg taaactaaca caagatgatt 60

atggggtaat tagtgactat ttgtcctatt ttggcacctc taagttttct gctgggtatt 120

cgttacaaaa ctttcctgaa atacccacta aaggtgaagt cgttacgaca ctgcgtaata 180

ttgttaatcg gtttgcggga tcatcagagg ggatcaatca ttggcgctat tacattgatg 240

cggtagagat ccatattcct ccattactgg tgccttatct gcaacaagaa aatgtcctcg 300

atgtcgtttg tactccttct atccccattg tcattggtgt gaatggccat tttcttaaag 360

atgaaaaatc acatttttct gcgttaagtt taaaacaact ttctgaaccc atactgtcaa 420

atggcacttc cactatccag aaaaatgaag gtgatgcggc gcatttatta catattcgcc 480

aagaaaccaa cgaagagtat cggttacacc attcttcagg tttttggaat ggttcgttaa 540

tttgcttagg 550

<210> 746
<211> 401
<212> DNA
<213> Proteus mirabilis

<400> 746
aagataggta cgcttttaat ttcttacagt ttactcacaa tgagtttgat ctctttttcc 60

tcctttgctc aagtaaatca cgatcccctg accaaatgtt atgagttgtc aacagatgca 120

agccaaacaa ccattaaatc ttgtctatta gatgaactga gattatctga agagcagttg 180

aatgttatct ataataaaag caaaggcgac cttgaagata gtgactctat cgcggctaaa 240

agtgctattg atgcattagt cagttcacaa gagcagttta ttctttttag aagtagtgaa 300

tgccaacgtc aatctgcttt aatgatgggg ggcaatggtg ctgatgaagt actgctggct 360

tgtgaaataa aattaaatca atggcgagct aaattattac t 401

<210> 747
<211> 513
<212> DNA
<213> Proteus mirabilis

<400> 747
tcacagtcac cactaatctc acgttgatta ttcctaaata tagtcaagtt tcttgtgatg 60

tgacaaattt tttcccgacc aaaccgattg aattacatac cttagtactg tctgaaactg 120

aattacaatc tgtgttctct ttactcaaac cattaataaa atcaggggcg ccgattactc 180

gtcatcttcc agattatcat ctatcaacac ctgaggtggt taaaactaat tttacgttac 240

ttcagcaatg tctaccgctt gaacatggca ccccctctca agagaccctg tttatgcaac 300

agagcctctt ttttattttg ctggcggttt atcacgaagg ggtcgatatt cttaatattt 360

ttcgttttaa ttatgatgag ccaaaaaatc aggcgatcac tcatctaata acacaagatc 420

cgcaacgtaa atggcattta gaggatgtag caaaaacgct ctatactaca ccatcaacat 480

tacgtcgcca tttaagtaaa gagggcgttt cgt 513

<210> 748
<211> 583
<212> DNA
<213> Proteus mirabilis

<400> 748
acgtccctga aacactctca ttagccattg atagcttctt aagttatatc gaagttgaac 60

ggcgattaag tccggtaacg gtagaaaatt accagcgaca attaatgacc attgcacaaa 120

tgatggttgc aataaaaatc aaccaatggt cgttactgga aagccaacat gtgcgcatgt 180

tattggctaa aagccatcgc agtggattac aacctgcaag tttagcattg cgcttttcag 240

cattgcgtag cttccttgat tggcaagttt ctcaaggaat gttagcagta aaccccgcca 300

aaggggttcg aacacccaaa tcaggtcgtc acttgcctaa aaatatggat gttgatgaag 360

tcagccagtt gatgaatatc gacttaaaag atcccctctc tgtaagggat agaacgatgc 420

tggaagtgat gtatggcgct ggattacgtt tatctgaact gactaactta aatatcaatg 480

atattgatct ccaagaaggc gaagtccgag tattaggtaa aggcagtaaa gagcgtaaag 540

ttcccttggg aagaaaagct gtagagtggt tacagcattg gtt 583

<210> 749
<211> 193
<212> DNA
<213> Proteus mirabilis

<400> 749
caggaacggg tttcttatca tcaataagat gtctaattgc taaataggga tgataaatta 60

gcattcgagg cccagcccaa cgcatgactt gtttcattgc tgctcttttt actggctgat 120

agcagtgaat tgggcattgt ttgcaggcgg gtttttcctc accatagcga catttatcta 180

gtcttttata agc 193

<210> 750
<211> 520
<212> DNA
<213> Proteus mirabilis

<400> 750
atcacttcta tccaaaacga agtgaagaac gttttagacg aaatcaaccg tatttctgaa 60

caaactcagt ttaacggcgt taaagtactg agcggtgaga aatcagaaat ggttatccaa 120

gttggtacta acgataatga aactatcaaa tttaacttag ataaagttga taacgataca 180

ttaggtgttg ctagcgataa actgtttgat accaaaacag agaaaaaagg tgttacagca 240

gcaggtgcgg gtgttactga tgctaaaaaa atcaatgcag ctgcgacact ggatatgatg 300

gtatcactgg taaaagaatt taatcttgat ggtaaaccag taactgataa atttattgtt 360

actaaaggtg gtaaagacta tgtagcaact aaaagtgatt ttgaattaga tgctacaggt 420

actaaacttg gattaaaagc atctgccact acagaattta aagttgatgc aggtaaagac 480

gttaaaactt taaacgttaa agatgacgct ttagcaactt 520

<210> 751
<211> 515
<212> DNA
<213> Proteus mirabilis

<400> 751
caacagtgat ttccatttga gaatctgtac cttctttacg agaagtcaga actaaatggt 60

taacgccatc ttgggctttt acaatagtgg cagaaacgtt gccttctttt ttattgatag 120

catcacgtaa ttcaataata gaagtttggc tgtctgttaa ctctattttt aaaggctctt 180

tttcaccttt ttgggtgatc actaaagtcc gtgttttgcc ttcacctaat gtttcaccaa 240

taggatcttt gatatcactg acggcttttg atttcagtgt ttgagcatgg gcaagctctg 300

ttacagagac cgtataatta ccaatgcttg ctttaccatc agtggttact ttaaaggcat 360

caaactcatc atcaactttg gtggcgacga ttttatcgaa ttttttttaat tcttcagatg 420

ctttctgtaa tttatctaat tggctacgaa tttttccata tgcagtaatt tgtgcatcgt 480

agcttttcat ctgtttgtct aaaggttcaa ggcgt 515

<210> 752
<211> 274
<212> DNA
<213> Proteus mirabilis

<400> 752
acacaatcca ttcatcagtt agagcaggat ctaggacgac caccatcaga acaggaagtt 60

gctgatcatt tgcagattga gttagcagaa taccggcaga tcctattgga tacaaataac 120

agccagttgt tctcttatga cgaatggcat gaaatttacg gtgaaagctg tgaaccgtct 180

caagacgaag atcacgatga caatccttta caaatgttat tggaaagtga tatacgccaa 240

agagtcatag acgcgataga attgcttccc gaaa 274

<210> 753
<211> 657
<212> DNA
<213> Proteus mirabilis

<400> 753
gacttaattg ctcctcgtat tgatagtaga gggaaaatca ctgctgctga aatttcagcc 60

tttactggac aaaacacctt ctcacaacat tttgatattc tctcttcaca aaaacccgtt 120

tcagcattag atagctattt ctttggtagt atgcaatcgg gtcgtatccg cattattaat 180

acggctgaag gtagtggagt taaattagca ggtaaattta ccgcagataa cgacctaagt 240

gttaaagccg ataatattca aacagatagt caagtccgtt atgacagtta cgataaagat 300

ggcagtgaaa attaccaaaa ctatcgtggc gggatcacgg ttaataatag tggctctagt 360

caaacactca ctaaaaccga attaaaaggt aaaaacatca cattagtagc gagtagccat 420

aatcaaatca aagcctctga tttaatgggg gatgacatca cgttacaagg tgctgattta 480

actatcgatg gtaaacagct acagcaaaaa gagaccgata ttgataatcg ctggttctac 540

tcgtggaaat acgatgtgac taaagagaaa gaacaaatac agcaaattgg tagccaaatt 600

gatgctaaaa ataatgcgac attaaccgca actaaaggag atgttacctt agacgcg 657

<210> 754
<211> 622
<212> DNA
<213> Proteus mirabilis

<400> 754
attaagcgca aatgaaacag gaaatttagg ctcaatcagt gaatcaaggc gtgcattgca 60

agatagccaa cgtgaaatta atcaattaat agaacaaaat cgctatcagc aactgcaaga 120

aaaagcggta aatatttcac ctaccccaac tttaattact gagtcagaac actgtttgcc 180

tataaaaggc gtttatattc aaggtattac tttacttact gagaaggatc tcaattcatt 240

atctccgtta cctgatcaat gtattaagag tgctgatatt aatcgcctcg taaaagaact 300

cacacagcgt tatcttcaac atggttatat taccgcacgt atccaatttt tacgtcctaa 360

ccaacatggc gaattaggtc tgtatgctat tgaagggttt gttgaacgta ttgaaggggg 420

tgatcgaggt gttaacacca cactactatt tcctcgaatc aaagggcaac cattaaaact 480

cgctacactc gatcaaggct tagatcaagc taaccgtttg caatcaaata aagtcacagt 540

ggatattctt cccggtaccg aattgggggg ctctgtcatt aagttgtcta atcaacgaaa 600

atcaccttgg catctcaata tc 622

<210> 755
<211> 450
<212> DNA
<213> Proteus mirabilis

<400> 755
aaaaatgtag tgtttcagat tttagcatta ttaagagata gtattttagt taaaagtgat 60

cgctgttcaa tgcttaattc cattgaagcc agagctccaa ttctggatta taggataatt 120

gaatttgcat ttaatgaggt tcctgataat tttaaaatta gaaatggaat gaaaaaattc 180

ctattgaaag atatatcaaa aaaaatatta cctaatgagt ttgattttca gaggaaatta 240

ggatttaatc taccactagg tatgatgatc agagagggaa aatggaagga atttttcggt 300

gatatattaa attcaaaatc tgatataatt aattattatt tttatactaa aatgtttgat 360

gagcatttaa gtggtaaaga gcgtgcagat cgtctatttg gcgtagtttt atttctaatc 420

tgggcaaaac ataataaagt atcgctatga 450

<210> 756
<211> 400
<212> DNA
<213> Proteus mirabilis

<400> 756
taaattagct ttagttcttg gtttaggttt atctgttgtt gcgggttctg ctttagctgc 60

agatcaaggt catggtactg ttaaatttgt tggttcaatc attgatgctc cttgctcaat 120

tactcctgat actgaaaatc aaacagttcc actaggtcaa atttctactg ctgcattaaa 180

agatggtggc cgtagtaatt ctcgtgactt taaaatctct ttagaaaatt gtactacaga 240

gacttacaaa actgttcaaa caactttcac tggctctgaa gcaactgaag ttttagaagg 300

ttctttaggc attgaaggta tcgctaaaaa tgcagctgtt gttatcaccg atgcgggtgg 360

taaacaaatc aaattaggca ccccaagtgc tgctcaaaac 400

<210> 757
<211> 500
<212> DNA
<213> Proteus mirabilis

<400> 757
tggcaccact attgctatgc cttgttgcca gtttagtgac tgcgccaacg atagccagtg 60

atgtaaaaca agataaaaac atgcatcagc gatttgggtg gctcaatcta caaggaacca 120

tattagagcc gtcatgtgca atatcagcgg gaagtagtga tcaagtgatc ccgctaacga 180

cggtatctat cccaacgtta gtcactgaag gtcaaggacc gattgaatat ttttctatca 240

gattaacgga ctgtacgcta attagccaga aagggcaaga agcggataat ccacgtttta 300

tcgcaacgtt cgatggtcct tctaatggaa atggcaactt tgagttatcc ggtgaggcca 360

aaggtgcttc attagcgata gcggatcgtt atggtcgaca agctattcca ggacaacccc 420

taccgcccgt tggcattgat tcgcagtcaa tggcattgct gtaccaagct cgaatagtca 480

aaaataacga tacgccaaaa 500

<210> 758
<211> 546
<212> DNA
<213> Proteus mirabilis

<400> 758
gatggtaatg ctgataataa caaagaactt tataccatta tgtttagtaa gcaatttcct 60

gactggggat tgagtactta cttaaactat agtcaccaaa catattggaa taagccaact 120

aatgataatt acaacttatc gttagcgaaa agcgcggata ttggtcgttt taaaaatatc 180

aattttagtc tctccgcttt ccgtaataaa tttaatggca ccaatgataa tggcgtttat 240

atgaatgtca gtatgccttg gggtgatcgt gcgaccatca gttacaacac tgtcattaat 300

aagagcggta actctcataa tgtcagctat tacgatcgaa ttgatgacaa tagcagttat 360

cgtgttggcg ctggggtaag tagcaatggt aaaccttcag ccgatgctta ttttatgcat 420

tatgctgatg cggccttagt caccgccagt gcaagtcata tcaatggtga atatacctct 480

gccactttat cgctacaagg tggtgccaca cttacgccga aaggtggagc attacaccgc 540

gttagt 546

<210> 759
<211> 320
<212> DNA
<213> Proteus mirabilis

<400> 759
caatctatgc ctcgcaaacg gatttaacca atccttggca agagcagatc actttaacta 60

aaaaaggtga tcgcttcgaa gtgaataatc caacgcctta ctatgtgaca ttagtcgatg 120

gattaaccag tttgaaagga aaaagcttgg atggctttga accattaatg atcgcaccta 180

aaagtagcgg cacgataaat ctgagtgctt ccatgtttgg tgcttcaccg gtattgagct 240

acatcaatga ttatggcggt cgccctcaga tgaaattcac ctgtagtggc aatcaatgca 300

aagtaacaga aacggcagct 320

<210> 760
<211> 507
<212> DNA
<213> Proteus mirabilis

<400> 760
aacagtggtt tagcccaagc aaggcagtgt tggtttttat tctggcaaca tttactggag 60

gcctgagttc tactgctgtt gctaacttac ctgcaggagc agtaataaga gcgacccccg 120

ggattgttta tatcaatatt actggaaacg tcatcgctcc acctccttgc ttaatcaatg 180

acggcaagat gatcgaggtg aattttggcg aagtaatgag tacgcgtatt aatgatagca 240

attataagca acctatcgaa tataccgcga cttgccaaaa aagaccgact aacgccatga 300

aagtctatat aacaggtaat gcaacagggt tcgatagtaa tgccctacaa actaatatta 360

cgggattagg ggtacgcatt ctttatcaag gtaaattatt aggattaggc tcagcggtta 420

aatttaccta tcccaatttg cctaaactag aagcgatccc tgtgcgtgat aatagagaaa 480

cactagttgg tggagatttt gttgcca 507

<210> 761
<211> 451
<212> DNA
<213> Proteus mirabilis

<400> 761
ttactaaatt ctacagcagt aatggcggcc gactcgccta atttaaaatt attcggaaca 60

ttattagtgc cacctccttg tgttatcagc aatgacgaac gaattgaggt ttttttggt 120

aagaacgtcg gtattaataa agttgatggt attaactata ccgaatcggt gaattatacc 180

ttggtatgcg acgctaattt aaaaggttgg gatttgggat tatcaattat cggacctaaa 240

acccagtttg atgaggcggc attgcaaacc aatattccag atttaggtat tcatttaact 300

caagatggta agccttttaa gctaaatgag cgtattggga tttcaccaga ttcgcctccg 360

gttattcaag ctgttccagt aaaaagaccg ggaagtacat tgcctgaagg ggcatttgaa 420

gtctcagcca ccttattagc agaataccaa t 451

<210> 762
<211> 526
<212> DNA
<213> Proteus mirabilis

<400> 762
ccggttcata ttgggtctat ctgtatccat agggttaact tcagcggctt ttgcaatacc 60

ggacaacctc tattttcacg gcatattagt tgatgagcct tgtaccataa aaccgggtga 120

tgaaaccgtg gtactcgatt ttggcaatat tcctgataaa aacctttatg cctataaaag 180

aacgccaagc aagttatttc aattacgtct gtcagaatgc gatctctcaa tcggtaaaag 240

cgtcaaaata acctttaaag gagaggaaaa ccaagcaatg gcaggagaag gatttttggc 300

aataagtccg ggcagccaag cttctggtat tgcggtggga ttagagtctg aaaatggtaa 360

tgctctacct ataaataaag aaacagacaa gatgtcatta actgcgggtg acactatttt 420

gaatttttat gcctttattc aaggtgagcc ggatgcgatt gcgaataagt cgattaaacg 480

tggtcctttt agtgcaatag ccaccttcta tttgaattat gactga 526

<210> 763
<211> 505
<212> DNA
<213> Proteus mirabilis

<400> 763
ccttctaacg ccacttacac ttatgttatt gagcgttggg atccagaaac ctcaggaata 60

ttaaatcctt gttatggttg gcctgtgtgt tatgtcacag tgaaccataa acatacagta 120

aatggtactg ggggaaatcc tgcatttcag attgctcgaa ttgaaaaact acgtacttta 180

gctgaagttc gtgatgtagt acttaaaaat agatcattcc ctattgaagg gcaaaccacc 240

cacagagggc cttcattaaa ctctaatcaa gagtgtgtgg gattatttta tcaaccgaat 300

tcaagtggta tatcacctcg aggaaaactc ttaccaggtt cactatgcgg tatcgcacca 360

ccaccagtgg gtgcttgtaa aatatctgaa ggtgcggtga accttaacta tggtgatatt 420

gatgaagcta gtttaagtgg tgctaagcgc tctgaaacaa tcaatgtaac ctgtaattta 480

gcaatgaaag tgttggttat cgcat 505

<210> 764
<211> 408
<212> DNA
<213> Proteus mirabilis

<400> 764
aacatatgag ggtgtggact aatagaaaca ttggcttttt tacctaaacg gcgtaataac 60

ccataaactt gttgacggga aattggtccc gtttttgtg ataaaaatac ccattcagaa 120

tctgattctc tccagttttc tctacttttc aaccagttgc ataaggcttc atattcctca 180

tcaataatag gttgtgttgt tgaaagccca ccttttaaac gcctgacata gagtattcta 240

ctttctagat caatatcgct taatgttaaa ttacatagtt cgctaacacg aaaaccatgt 300

aaaaaacaca ttaaaaacat acagtaatct ctttcgggat acctaccttc cttagcttgc 360

tttaaaatag cattcacttc aaaacgtgta agaaatttac gttgcttc 408

<210> 765
<211> 310
<212> DNA
<213> Proteus mirabilis

<400> 765
ttgattttgc gaatatagat gtaaatgctt ctgtaggtaa aaagatccaa aaaaaacgta 60

aagagctggg ttataccggt atgcagctgg ctaaaaaaat tggtgtcagc cagcaacagt 120

tttctcgcta tgaacgaggt atgaacaaaa tagatctcag acatttagtg ttgttagctc 180

tctatttaaa tacacccatt tattggtttt ttgaggattg ctacgtaaaa aagccttcat 240

taaataataa aggaatagat aagcgcaatt atgttattgc tcaagcaaca cctgatgctt 300

ttcattattg 310

<210> 766
<211> 510
<212> DNA
<213> Proteus mirabilis

<400> 766
tggagtatca gagctatttt gtttaagcct ttttttggaa atattggact ttattcctat 60

cttggaaaac ctatattctt attgggtatc aaaaaagtat ttttaggacg tagagttaga 120

attttccctc actctagaat tgaagtgcat ggaaataaat tgtatgagga taatatctct 180

ataggacagt catttcatat aatatgttca agtaatatta ttatatctga aggtacatta 240

atctctgcta atgtatttat tactgatact gatcatacat ataaaaatat ttctctaccc 300

attcatgttc aaaaaactaa tatttctacc acttatattg gtaaaaattg ttttatagga 360

tatggcgttg ttattcaagc tggaacaaaa ttaggaaata attgtatcgt tggtgcaaac 420

tcaacaataa aaggctcttt tttcgataat tcaataattg taggttcacc tggacggatt 480

attaaaaaac tagataaatt atggctgact 510

<210> 767
<211> 934
<212> DNA
<213> Proteus mirabilis

<400> 767
ctatcagcca cctcttcttg aatacagaga atacgcaaag cagaacaacg ttgacccgca 60

ctatcataag cagaggccat aacgtcagtg accacttgtt ccgttaaggc agaagagtcg 120

acaatcatgg cgtttaagcc acctgtttca gcaattaaag gaacagggcg accttcgcta 180

tcgagtctac ccgctaaggt tttttgcaaa atgtgggcaa cttcggtaga gcctgtaaac 240

atcacaccac gcacgcgttc atctgccact aattgtgcac caatggtctc cccttgaccc 300

ggtaagagtt gtaatgcact gcgaggtact cctgcttgat aaaatagttc tacggcttta 360

aaagcaatca gaggggtttg ctccgcaggt ttggccagta cggtattacc tgccgctaac 420

gccgctgcaa tttgtccact aaagatggct aatgggaagt tccaaggact aatacagaca 480

acagggccta aaggacgatg ggtattatta tcaaaatcat ttgccacttg tgctgagtaa 540

taataaagaa aatcaattgc ctcacgcact tctgcaatag cattactata ggttttgccc 600

gcttctctta ctaagacccc cattaatggg cccatttgct gttccatcag ctcagccgtg 660

cggactaaaa atgccgctct ttccgcaggt ggggttgcaa accaaatttc accattttct 720

tgggcaatat ctaaagcaaa attagcttcg gcggccgtcg tttcacgtac tgtaccgacg 780

acatcggtgt gatttgccgg attgagtata gattgtggtg caatcacttc ttctgcacta 840

ttacactcac caccaatgag cggatggctg tgaatttttt ccatcgcaga ggtcagtaat 900

gcactggata atgaggctaa acgatgctca ttag 934

<210> 768
<211> 501
<212> DNA
<213> Proteus mirabilis

<400> 768
gcactagcta ctattctttc tgctgcattt gctggctcat ctatggcgta tgacggaaca 60

attacattta caggtaaagt tgttgcgcaa acctgctctg tcaatacaaa tgataagaat 120

ttagcggtaa cattacctac agtatccacc actacattaa atgaaaatgc ggctactgca 180

ggtcttactc catttactat tcatttaact ggttgcgctg ttggtatgga tggtgcacaa 240

agtgtcaaaa catattttga accttcaagt gacattgatg taaccacaca caacttaaaa 300

aatactgcac aaactaaagc tgataatgtt caagttcaat tacttaactc agatgcagca 360

acaacaatcc agttaggtac tgattctgca acacaagatg tccatccagt acaaatcgac 420

aatgctaatg taaacctccc atattttgct caatattatg caaccggaca atctaccgct 480

ggggatgtaa aagcaaccgt t 501

<210> 769
<211> 383
<212> DNA
<213> Proteus mirabilis

<400> 769
gaggtactgc atcgcaaacg cagacattga cggttgcaca agagggcttt ttagagtggt 60

taccccaaga gaatatcttt tttcctgatg ctcaagtgtg tttaaccaca catattcatt 120

tagcctcatc agcgaaattt atcggctggg aaatgcagtg ttttggacgc ccagttttaa 180

atgagtggtt tgaaactggc aaggtaaaag ggcgcttaaa tttttatgtt gatgagagat 240

taattttaac agagtcaatg cgggttgaag gcttacaaaa acaagctgcc gcaatgcgtg 300

aatttcctat gtttggctcg ctttatattt atcctgcaac cgatgcatta aaagagatta 360

ttcaacacca tttagagaag gta 383

<210> 770
<211> 414
<212> DNA
<213> Proteus mirabilis

<400> 770
gcgcttgaac taacctctac agaaaagcca aagttaaccc tttgtcttac catggatgag 60

cgcaccaaaa gtcgcttaaa agtggcttta agtgacgggc aagaagccgg gctatttttg 120

cctcgaggca ccgtacttaa agagggggat attctgctgt cagaagaggg cgatgttgtc 180

accattgaag cggctaaaga gcaagtatca acggtttata gtgacgatcc attattgctt 240

gctcgtgttt gttatcactt aggtaaccga catgtaccat tgcaaataga agcgggttgg 300

tgtcgttatt ttcacgatca tgtattagat gatatggctc gcggcttagg ggctacggtg 360

gtggttggct tagaaaaata ccaacctgag ccggggcctt atggtgggtc atcc 414

<210> 771
<211> 500
<212> DNA
<213> Proteus mirabilis

<400> 771
gctcagcaga aaccttgtca gattggttaa gcgcacaaat gaccggaaca ttagccacac 60

tcgagcttcc tatattgcgg caattacaaa cgagtttggc aaagggtgat agcgatacag 120

tgaaatattg gtgtgacttt atggtcgcaa gtcgcgaaac caaagagtta aggcaggaag 180

agcgtcaacc ggggatcgct tttccccgtt tacttcctca attaggcatt gaattagacg 240

atacgttaca acagcgggtt aaacagacgc aattaatggc gtttgcgtta gctgccgtgc 300

attggcatat cgatagtgaa aagctctgtt gtgcctatgt ttggggctgg ttagaaaata 360

cggtgatgtc tggggtaaaa ctggtgccat tagggcaaag cgcagggcaa aaaatgttgt 420

ttgctctagc tgagcagatc cccgctattg ttgagttatc ggcacattgg ccacaagagg 480

atattggcag tttacgccag 500

<210> 772
<211> 560
<212> DNA
<213> Proteus mirabilis

<400> 772
gggatcttct ataactattc aaccaaagta ttaccttctt ttgattatga taccgcagga 60

aaacatatag cccgtgaaga ttccacttgg aatggcaaat atgttattgg gcaacccgct 120

gaggtgactt attcattccc aaaatgggaa ggcaaattta atcaatttgg taataagaat 180

ccttatgaat ttaatgaatt acaaaaagag catgcaagaa aatctttaga tgcatggtct 240

gatattgcaa atattaaatt tactgaagtt gctgttggga atgttgatgg aatgaaggct 300

tctgacgtaa aaacagatat tacttttggt aatatctatg atcccaatgg cacatttcag 360

gcttatgcaa cattgcctaa tacctatgct tatggaaaag atctttctgg ccaagcatgg 420

tttagtgatt atcattatgc aggtaatact acaccagaat tgggtaatta tggtcgttta 480

actattatcc atgaaattgg tcatacactg ggtcttatgc atcctggtga ttataacgca 540

ggtcagaatg ttccaggtta 560

<210> 773
<211> 509
<212> DNA
<213> Proteus mirabilis

<400> 773
tttctttgat ctaccttggt tccctattta ccttttagtt attactttat ttaatccttg 60

gttaggatta tttgcacttt gtggtgccct tatcttattt gctttggcta tccttaatga 120

atatctatct aaaaatcatt taaaaaaagc gaatagtttt gccaatcaag cacaattaat 180

acaaagtcat catttagaac atccacagac tatcgaagcg atgggaatgc ttagtcaatt 240

acgtaaacaa tggcaaacct ctcatttcaa atacttacaa gcacaaacac aagccagtga 300

taatgcagcc ggtatcaacg ctatcacaaa agtaacacgt atggcattac aatctttaat 360

gctaggttta gggggatggc ttgctattga taatactatt agtcctggaa tgatgattgc 420

aggttcaata cttttaggtc gagcattagc ccctattgag caagtgatca atgtatggaa 480

aagttgggat agtagtaaag cagcctaca 509

<210> 774
<211> 576
<212> DNA
<213> Proteus mirabilis

<400> 774
aagaacaagt agcaggtaaa gagtatgaaa atatcgggtt atcacaattg ctacccaata 60

tttctgtcaa ttacaaaaat aatcctcgca actggcaacg taaggcttat ccaataaata 120

tatttcagga taaaataaca acagttgagt atcaaaacta tcaaagctat tctgtcaacg 180

cgattattag tcaaccacta tttgactaca ccgcatttag tgaatacaaa gcttctatca 240

ttaaaacatt attagcagac agtcattatc aaaataaatt ttcagaatta attattcgac 300

ttatcgataa ttatattcaa gttgcttata cacaagataa attattacta aatcaagcac 360

agcaagaaat ctatcaaaaa caactagctt caagtcaacg cctatttgag ttaggagaag 420

gaaccaaaac agatattgct gaaatagaga ctcgtttata tttaacccag tcacaatata 480

ccgatcttca attagaaatt gaaaaggcta aaaacaaact cagtgctatg atcggttcac 540

aattgcctac tcatgagcac atcgcaaagc taactg 576

<210> 775
<211> 626
<212> DNA
<213> Proteus mirabilis

<400> 775
ccaacttact tctatctacc tgatggtaaa attgttataa attatatgta tggttggcct 60

aaacaaccac atagtaatat caccaaaata aattatatat tccctgatta tgataaaaaa 120

agaaattact caaataaaaa atattcagta acagaaaaag atagaataga atcaataaaa 180

cataccgcta aagtatatga attgacctat cttaaggaaa aaaaagaaaa agaaatcgct 240

tcattaaaat attatagaaa taaatattca ataagtagaa tagctgaatt agaaaaagat 300

atagaggata tagaaaatag tattattttt cacaagaata gtatacatcc gtatttttac 360

aatacacaaa caaccatata tcctcatcaa caagaagtta tttccgatat tcttagtgaa 420

attgcccata taacacaagc aaagtttgtt gcatctaatc cagaattcga tgccgatata 480

aaatttggtt tttacgatga ttttcatatt agtcatggtt caatagaatt ttcatatacc 540

accagaggtt ttgcaaccta ccctagcaga tattcaaccc ctataaaaaa gataaatatt 600

gatgaacaat accaatactc tggaac 626

<210> 776
<211> 583
<212> DNA
<213> Proteus vulgaris

<400> 776
catcttattg tgggtccaag cctacagcaa tttaataaag tattagctta tgagatacga 60

actttcatcc ccgaggagct cattttagtt gatggcactc cgcttaaaat ttccccagct 120

ctgcgtaata aaatctacaa tgaattaggt atttcctttt ttgataaaaa aacagcatta 180

aaagaagggc ttcattgggc gaaagaagat gatgagctta gccaacagat gtctgaatac 240

cttaatggtg aaaccgtaat ttggattgag agcacactgg aatatcctgt tttatggatt 300

aacacctata tttcaccttc tttatggatc cgggttccac tcactgaatt aggcgaaaat 360

ttcttactgc cagtttatcg ccaagcaatt atttttatta ttattgttat tgcctttttc 420

tggttatata accgttttca aaatcgccca ttaaacgaag tggaatatgc agctcgtcgt 480

attggtaaag gcgttattcc tcccccctatc ccagaatcag gttcatcaga gatgcgttcg 540

atcattcgag catttaatca aatgtcatca ggtattcgct ctt 583

<210> 777
<211> 383
<212> DNA
<213> Proteus vulgaris

<400> 777
cgtaagcctt atgttcgtgg tatgcagcca aactggtgga cgaaactcgg tttctatcgt 60

ttctacatca cccgtgaagg aacttgtcta ccacaacttt ggttcagtct ggttgtactg 120

ttcggtgtat ttgcactgaa aaatggacca gaaagttggg cgggattcgt tggattccta 180

agtaacccaa tactgatgct gattaatatt gtgaccctta tcgcaacggt attccatacg 240

gccacttggt ttaagcttgc accgaaagcc gttaatatcg tcgttaaaga tgaaaaatta 300

ccacaagagc ctatcgttcg tggtttatgg ggtctaacca tcgtcgtgac tgtcgttatt 360

ctggcagtgg cgctaattgt tta 383

<210> 778
<211> 345
<212> DNA
<213> Proteus vulgaris

<400> 778
aatcagaatc aacttcctaa gcgctctgat gaacctattt tctggggatt atttggtgca 60

ggtggtatgt ggagtgcgat tgtctctcca gcaattatta tcctgctcgg tattctaatc 120

ccgatgggta ttgcgccaga agcatttact tacgatcgta tcatggcatt tagccaaggt 180

tttattggtc gtattttctt actgctaatg attattctgc cagtttggtg tgcattacac 240

cgtattcacc atacgttgca ccattttaaa gtgcatgtac ctgctagtaa ttgggtattt 300

tatggtgctg cagcaattat tagcgttatc gcaattattg gtgtt 345

<210> 779
<211> 534
<212> DNA
<213> Proteus vulgaris

<400> 779
gcgaagtaga agagaaagca cagcgcgaag cacaagaaaa agcacagcgc gcagctgaag 60

aaaaagcaaa acgtgaagca caagaggcca agaaacaggc cgaagaaaaa gcgaaacgtg 120

aagctgaaga agcaaaacgt gaagcagcgg aattagctaa gcgcgaagca gcggaaaaaa 180

ataaagtgaa acaaaacgat aaaccaaaag ctgatgtagc agatcaggat aaagcacgtc 240

gcaatgctga actggctgaa ctgaaacgta aaacagaaga agcacagcgc cttaaagttg 300

aagaagagac gcgcgctgca gcagaaaaag cacgccgctt agctgaagaa aacgctgaaa 360

aatggactgc tgaacctaag gctcctgaaa cagaaagcgc ggactatcat gtaactacat 420

ctcgttatgc tcgtgatgca gaagatgaaa gcgatgcaga agtagaaggt gatcgccgcc 480

gcggtcgtac tgctaaagca cctcgtgcta agaaaaataa ccgccactct gaaa 534

<210> 780
<211> 582
<212> DNA
<213> Proteus vulgaris

<400> 780
agctgatgtt gttgttgttg gtgctggtat ccttggtatt atgacagcaa ttaaccttgt 60

agaacgtggt ttatctgttg taattgttga gaaaggtaat atcgcgggtg agcaatcttc 120

gagattctat ggtcaggcaa ttagctataa aatgccagat gaaacgttct tattacacca 180

tttgggcaaa catcgctggc gtgaaatgaa tgcgaaagta ggtattgata ctacttatcg 240

tacacaaggc cgcgttgaag ttcctcttga tgaagaagat ttagttaacg taagaaaatg 300

gattgatgaa agaagtaaaa atgttggctc agatattcca tttaaaacca gaattattga 360

aggtgctgaa ttaaatcaac gtcttcgtgg cgcgacaaca gattggaaaa ttgctggctt 420

tgaagaagat tctggtagct tcgatccaga agttgcaacc ttcgttatgg ctgaatacgc 480

taaaaaaatg ggtgttagaa tttacactca atgcgcggct cgtggcttag aaacacaagc 540

tggtgtaatt tctgacgttg taacagagaa aggtgcaatc aa 582

<210> 781
<211> 553
<212> DNA
<213> Proteus vulgaris

<400> 781
ctaaatatgg cgcaggaaca aattactttg atatatccaa agagttatta ccgaagtggg 60

cttgttatat tgccaatgct tcattgatct ttgtattata tatattgatc tatgcttata 120

tctctgcggc gggttctatt atctatgaag catcactgtt atatggtatt aattttaatc 180

tgagagctat attttttatt tttacgatag cccttggtgc tacaatatgg tggggtggcg 240

cttgtgctag ccgtttaacc tcaattttct tattcattaa gatagtatta tttatattag 300

cgttttcggg tttgtttttt aaagcaaaag gtgatttatt atttagtgca acttttgcag 360

gaaaaagcca attatatctt tatcctttta tttttattat cattccttat gccattacct 420

catttggata tcatggtaat gtttgtagtc tttataagct ttataatcaa aacgaaagaa 480

aagtagttaa gagttgtatc attggttgct tgttagcatt agtcatctat ttactttgga 540

tgattggcac tat 553

<210> 782
<211> 260
<212> DNA
<213> Proteus vulgaris

<400> 782
gttcataggc ttcacgtagt tcagcacagt ttttaacaga gtttaaatgg ctaacagggg 60

accaaacacg agaaagctta tcgcctgctt ctgctaatgg ttggcaaagg ttatcctgag 120

taaattgagt attatcagcc agtaattttt caactgtttc acgatatgtg gttaaaactt 180

cgtttagtgc aggaacgaca tgttctggtt tgataaggga aaatgcaggt aatcccgttg 240

tgctaagtaa tggatttgac 260

<210> 783
<211> 199
<212> DNA
<213> Proteus vulgaris

<400> 783
tggctgaaaa tgtcgttaat gatattctaa aatggttaga aacccagtta caacgtaacg 60

aaggtataaa aatcgatact attgcgaaca aaagtggtta ttcaaaatgg cacttacaac 120

gcatatttaa agattttaaa ggctgcacat taggcgaata tgtccgcaaa cgtcgcttat 180

tagaagcggc taaatcatt 199

<210> 784
<211> 220
<212> DNA
<213> Proteus vulgaris

<400> 784
gaaaggactt aaacttaact atccagagtc tgtcgcatta attagttgcg cgattatgga 60

aggtgcaaga gaaggtaaaa cagtggctca attaatgagt gaagggcgtg ctgtattaac 120

agcagaacaa gttatggaag gcattcctga gatgatcaaa gacattcagg tggaatgcac 180

attccctgat ggtacaaaac ttgtttctat tcacgaccct 220

<210> 785
<211> 503
<212> DNA
<213> Pseudomonas aeruginosa

<400> 785
actgacgctt atttgattga cactccattt acagctaaag atactgaaaa gttagttact 60

tggtttgtag agcgcggcta taaaataaaa ggcagtatct cctctcattt tcatagcgac 120

agcacgggcg gaatagagtg gcttaattct caatctattc caacatatgc atctgaatta 180

acaaatgaac ttcttaaaaa agacggtaag gtacaagcta aaaattcatt tagcggagcc 240

agctattggt tagttaagaa aaagattgaa atttttatc ctggcccagg gcacactcca 300

gataacgtag tggtttggct acctgaacat agagttttgt ttggtggttg ttttgttaaa 360

ccgtatggtc taggtaattt gggtgacgca aatttagaag cttggccaaa gtctgccaaa 420

ttattagtgt ccaaatatgg taaggcaaaa ctggttgttc caagtcacag tgaagttgga 480

gatgcatcac tcttgaaacg tac 503

<210> 786
<211> 348
<212> DNA
<213> Staphylococcus epidermidis

<400> 786
atggataata aaacgtatga aatatcatct gcagaatggg aagttatgaa tatcatttgg 60

atgaaaaaat atgcaagtgc gaataatata atagaagaaa tacaaatgca aaaggactgg 120

agtccaaaaa ccattcgtac acttataacg agattgtata aaaagggatt tatagatcgt 180

aaaaaagaca ataaaatttt tcaatattac tctcttgtag aagaaagtga tataaaatat 240

aaaacatcta aaactttat caataaagta tacaaaggcg gtttcaattc acttgtctta 300

aactttgtag aaaaagaaga tctatcacaa gatgaaatag aagaattg 348

<210> 787
<211> 530
<212> DNA
<213> Pseudomonas aeruginosa

<400> 787
tagctcgtgc atcaaaggaa tatcttccag catcaacatt taagatcccc aacgcaatta 60

tcggcctaga aactggtgtc ataaagaatg agcatcaggt tttcaaatgg gacggaaagc 120

caagagccat gaagcaatgg gaaagagact tgaccttaag aggggcaata caagtttcag 180

ctgttcccgt atttcaacaa atcgccagag aagttggcga agtaagaatg cagaaatacc 240

ttaaaaaatt ttcctatggc aaccagaata tcagtggtgg cattgacaaa ttctggttgg 300

aaggccagct tagaatttcc gcagttaatc aagtggagtt tctagagtct ctatatttaa 360

ataaattgtc agcatctaaa gaaaaccagc taatagtaaa agaggctttg gtaacggagg 420

cggcacctga atatctagtg cattcaaaaa ctggtttttc tggtgtggga actgagtcaa 480

atcctggtgt cgcatggtgg gttgggtggg ttgagaagga gacagaggtt 530

<210> 788
<211> 322
<212> DNA
<213> Proteus vulgaris

<400> 788
acactggctg aattaagtgc tgctacattg caatatagcg ataatacagc aatgaataag 60

atattagatt atttaggcgg tccagccaaa gtcactcaat ttgcacgttc aattaatgat 120

gtcacttatc gccttgatcg taaagagcct gaattaaata cagcaattca tggtgatcct 180

cgtgatacta cttctccaat tgcgatggct aaaagtcttc aagcactgac attaggcgat 240

gcactaggtc aatctcagcg tcaacaactt gtgacttggt taaaaggtaa tacaacgggt 300

gataacagta ttaaagcggg tt 322

<210> 789
<211> 625
<212> DNA
<213> Klebsiella oxytoca

<400> 789
ttatctgcaa cactgatttc cgctctgctg gcgttttccg ccccggggtt ttctgccgct 60

gataatgtcg cggcggtggt ggacagcacc attaaaccgc tgatggcaca gcaggatatt 120

cccgggatgg cggttgccgt ctccgtaaag ggtaagccct attatttcaa ttatggtttt 180

gccgatattc aggcaaaaca gccggtcact gaaaatacac tatttgagct cggatctgta 240

agtaaaactt tcacaggtgt gctgggtgcg gtttctgtgg cgaaaaaaga gatggcgctg 300

aatgatccgg cggcaaaata ccagccggag ctggctctgc cgcagtggaa ggggatcaca 360

ttgctggatc tggctaccta taccgcaggc ggactgccgt tacaggtgcc ggatgcggta 420

aaaagccgtg cggatctgct gaatttctat cagcagtggc agccgtcccg gaaaccgggc 480

gatatgcgtc tgtatgcaaa cagcagtatc ggcctgtttg gtgctctgac cgcaaacgcg 540

gcggggatgc cgtatgagca gttgctgact gcacggatcc tggcaccgct ggggttatct 600

cacaccttta ttactgtgcc ggaaa 625

<210> 790
<211> 482
<212> DNA
<213> Staphylococcus aureus

<400> 790
gaaaattcac gtatgtcatg gaatcataag cattaccctt ttgatgcttg gaataaggaa 60

caagatttaa atacagcaat gcaaaattca gttaattggt acttcgaacg tattagcgat 120

caaataccaa agaactatac tgcgactcaa ctcaagcaat taaattatgg taataaaaat 180

ttgggaagtt ataaaagcta ttggatggaa gatagtttga aaatatctaa tcttgaacaa 240

gtaatagttt ttaaaaatat gatggaacaa aataaccatt ttagtaaaaa agcaaagaat 300

caattatctt cttcattatt gattaagaaa aatgaaaagt atgaactgta tgggaaaaca 360

ggtacaggta tagtaaacgg gaagtataat aatgggtggt ttgtaggtta cgtaattaca 420

aatcatgata agtattattt tgctacacat ttatcagatg gaaagccatc tgggaaaaat 480

gc 482

<210> 791
<211> 703
<212> DNA
<213> Pseudomonas aeruginosa

<400> 791
acgttctgac tggaggaagt ttttcagcga atttcaagcc aaaggcacga tagttgtggc 60

agacgaacgc caagcggatc gtgccatgtt ggtttttgat cctgtgcgat cgaagaaacg 120

ctactcgcct gcatcgacat tcaagatacc tcatacactt tttgcacttg atgcaggcgc 180

tgttcgtgat gagttccaga tttttcgatg ggacggcgtt aacaggggct ttgcaggcca 240

caatcaagac caagatttgc gatcagcaat gcggaattct actgtttggg tgtatgagct 300

atttgcaaag gaaattggtg atgacaaagc tcggcgctat ttgaagaaaa tcgactatgg 360

caacgccgat ccttcgacaa gtaatggcga ttactggata gaaggcagca ttgcaatctc 420

ggcgcaggag caaattgcat ttctcaggaa gctctatcgt aacgagctgc cctttcgggt 480

agaacatcag cgcttggtca aggatctcat gattgtggaa gccggtcgca actggatact 540

gcgtgcaaag acgggctggg aaggccgtat gggttggtgg gtaggatggg ttgagtggcc 600

gactggctcc gtattcttcg cactgaatat tgatacgcca aacagaatgg atgatctttt 660

caagagggag gcaatcgtgc gggcaatcct tcgctctatt gaa 703

<210> 792
<211> 758
<212> DNA
<213> Klebsiella pneumoniae

<400> 792
tcacgctgtt gttaggaagt gtgccgctgt atgcgcaaac ggcggacgta cagcaaaaac 60

ttgccgaatt agagcggcag tcgggaggca gactgggtgt ggcattgatt aacacagcag 120

ataattcgca aatactttat cgtgctgatg agcgctttgc gatgtgcagc accagtaaag 180

tgatggccgc ggccgcggtg ctgaagaaaa gtgaaagcga accgaatctg ttaaatcagc 240

gagttgagat caaaaaatct gaccttgtta actataatcc gattgcggaa aagcacgtca 300

atgggacgat gtcactggct gagcttagcg cggccgcgct acagtacagc gataacgtgg 360

cgatgaataa gctgattgct cacgttggcg gcccggctag cgtcaccgcg ttcgcccgac 420

agctgggaga cgaaacgttc cgtctcgacc gtaccgagcc gacgttaaac accgccattc 480

cgggcgatcc gcgtgatacc acttcacctc gggcaatggc gcaaactctg cggaatctga 540

cgctgggtaa agcattgggc gacagccaac gggcgcagct ggtgacatgg atgaaaggca 600

ataccaccgg tgcagcgagc attcaggctg gactgcctgc ttcctgggtt gtgggggata 660

aaaccggcag cggtgactat ggcaccacca acgatatcgc ggtgatctgg ccaaaagatc 720

gtgcgccgct gattctggtc acttacttca cccagcct 758

<210> 793
<211> 680
<212> DNA
<213> Streptococcus pneumoniae

<400> 793
cggaactgta taatcccttg aattccgtag aagattctac taatcggcgc gatactgtct 60

tgcagaatat ggttgcagca ggatatattg ataaaaacca agaaaccgaa gctgctgaag 120

ttgatatgac ttcgcaattg cacgataagt atgaaggaaa aatctcagat taccgttacc 180

cctcttattt tgatgcggtg gttaatgaag ctgtttccaa gtataatcta acagaggaag 240

agattgtcaa taatggctac cgcatttaca cagagctgga ccaaaactac caagcaaata 300

tgcagattgt ttatgaaaac acatcgctat ttccgagggc agaggatgga acgtttgctc 360

aatcaggaag tgtagctctc gaaccgaaaa caggggggagt tcgtggagtt gtcggtcaag 420

ttgctgacaa tgataaaact ggattccgga atttcaacta tgcaacccaa tcaaagcgta 480

gtcctggttc tacaattaag cctttagttg tttatacacc agcagttgaa gcaggctggg 540

ctttgaataa gcagttggat aaccatacca tgcagtatga tagctataag gttgataact 600

atgcagggat caaaacaagt cgagaagttc ctatgtatca atccttggca gaatcgctta 660

atctacctgc tgttgccact 680

<210> 794
<211> 669
<212> DNA
<213> Klebsiella pneumoniae

<400> 794
cgtaggcatg atagaaatgg atctggccag cggccgcacg ctgaccgcct ggcgcgccga 60

tgaacgcttt cccatgatga gcacctttaa agtagtgctc tgcggcgcag tgctggcgcg 120

ggtggatgcc ggtgacgaac agctggagcg aaagatccac tatcgccagc aggatctggt 180

ggactactcg ccggtcagcg aaaaacacct tgccgacggc atgacggtcg gcgaactctg 240

cgccgccgcc attaccatga gcgataacag cgccgccaat ctgctactgg ccaccgtcgg 300

cggccccgca ggattgactg cctttttgcg ccagatcggc gacaacgtca cccgccttga 360

ccgctgggaa acggaactga atgaggcgct tcccggcgac gcccgcgaca ccactacccc 420

ggccagcatg gccgcgaccc tgcgcaagct gctgaccagc cagcgtctga gcgcccgttc 480

gcaacggcag ctgctgcagt ggatggtgga cgatcgggtc gccggaccgt tgatccgctc 540

cgtgctgccg gcgggctggt ttatcgccga taagaccgga gctggcgagc ggggtgcgcg 600

cgggattgtc gccctgcttg gcccgaataa caaagcagag cgcattgtgg tgatttatct 660

gcgggatac 669

<210> 795
<211> 551
<212> DNA
<213> Salmonella typhimurium

<400> 795
cacgatagtt gtggcagacg aacgccaagc ggatcgtgcc atgttggttt ttgatcctgt 60

gcgatcgaag aaacgctact cgcctgcatc gacattcaag atacctcata cactttttgc 120

acttgatgca ggcgctgttc gtgatgagtt ccagattttt cgatgggacg gcgttaacag 180

gggctttgca ggccacaatc aagaccaaga tttgcgatca gcaatgcgga attctactgt 240

ttgggtgtat gagctatttg caaaggaaat tggtgatgac aaagctcggc gctatttgaa 300

gaaaatcgac tatggcaacg ccgatccttc gacaagtaat ggcgattact ggatagaagg 360

cagccttgca atctcggcgc aggagcaaat tgcatttctc aggaagctct atcgtaacga 420

gctgcccttt cgggtagaac atcagcgctt ggtcaaggat ctcatgattg tggaagccgg 480

tcgcaactgg atactgcgtg caaagacggg ctgggaaggc cgtatgggtt ggtgggtagg 540

atgggttgag t 551

<210> 796
<211> 557
<212> DNA
<213> Staphylococcus haemolyticus

<400> 796
agcttttgtt ttatatttct attggtatta ttttttaggt acatattaaa acgctatttt 60

aattatatgt taaattataa agtttggtat ctaactcttc ttgcaggatt aattcctttc 120

attcctatta aattctctct ttttaaattt aataatgtga ataatcaagc gcccacagtt 180

gaaagtaagt cacacgactt gaaccataac ataaatacca ccaaacctat tcaagagttc 240

gcaacagata tccataagtt taattgggat tcaattgata atatctgcac agttatttgg 300

atagttttag ttattatttt aagttttaaa tttttgaaag ccttattata tcttaaatat 360

ttaaagaaac agtcacttta tctaaacgaa aatgaaaaaa ataaaataga tacgatactt 420

ttcaaccatc aatataaaaa aaatattgtg attcgaaaag cagagactat tcaatctcca 480

ataacttttt ggtatgggaa atatattatt ttgattccta gttcatattt taaaagtgta 540

attgacaaaa gactaaa 557

<210> 797
<211> 558
<212> DNA
<213> Pseudomonas aeruginosa

<400> 797
ttgacgaagg cgtttatgtt catacttcgt ttgaggaagt taacggctgg ggcgtggttc 60

ctaaacacgg cttggtggtt cttgtaaata ctgacgctta tttgattgac actccattta 120

cagctaaaga tactgaaaag ttagttactt ggtttgtaga gcgcggctat aaaataaaag 180

gcagtatctc ctctcatttt catagcgaca gcacgggcgg aatagagtgg cttaattctc 240

aatctattcc aacatatgca tctgaattaa caaatgaact tcttaaaaaa gacggtaagg 300

tacaagctaa aaattcattt agcggagcca gctattggtt agttaagaaa aagattgaaa 360

ttttttatcc tggcccaggg cacactccag ataacgtagt ggtttggcta cctgaacata 420

gagttttgtt tggtggttgt tttgttaaac cgtatggtct aggtaatttg ggtgacgcaa 480

atttagaagc ttggccaaag tctgccaaat tattagtgtc caaatatggt aaggcaaaac 540

tggttgttcc aagtcaca 558

<210> 798
<211> 421
<212> DNA
<213> Staphylococcus aureus

<400> 798
ttaaagaatg gaaccaagat caaaatttaa attcttcaat gaaatattca gtaaattggt 60

attacgaaaa tttaaacaaa catttaagac aagatgaggt taaatcttat ttagatctaa 120

ttgaatatgg taatgaagaa atatcaggga atgaaaatta ttggaatgaa tcttcattaa 180

aaatttctgc aatagaacag gttaatttgt tgaaaaatat gaaacaacat aacatgcatt 240

ttgataataa ggctattgaa aaagttgaaa atagtatgac tttgaaacaa aaagatactt 300

ataaatatgt aggtaaaact ggaacaggaa tcgtgaatca caaagaagca aatggatggt 360

tcgtaggtta tgttgaaacg aaagataata cgtattattt tgctacacat ttaaaaggcg 420

a 421

<210> 799
<211> 260
<212> DNA
<213> Klebsiella oxytoca

<400> 799
gacaataccg cgatgaataa gatgattagc taccttggcg gaccggaaaa ggtgaccgca 60

ttcgcccaga gtatcgggga tgtcactttt cgtctcgatc gtacggagcc ggcgctgaac 120

agcgcgattc ccggcgataa gcgcgatacc accaccccgt tggcgatggc cgaaagcctg 180

cgcaagctga cgctgggcaa tgcgctgggc gaacagcagc gcgcccagtt agtgacgtgg 240

ctaaaaggca ataccaccgg 260

<210> 800

<211> 605
<212> DNA
<213> Streptococcus pyogenes

<400> 800
aatcatcctc gtggctttga tcagcattta aaactactgt aataaccctc atttgatttt 60

cgacactagt agctacaaaa gaagcaccgg ctttttttaga ataaccaaca aaaagaccat 120

ccacgccttc tcgataacaa ggcatgcctt taagcatgta attataactg taaatggttt 180

gtccagcaaa aatagtggag gatttgctag ataatttcag tacttctgga aattctaata 240

agagatgcct ggcaataaca gctaaatcag tggcgcaaaa acaattttca tcatctggtt 300

ctgtattagg ataagtatta gctcctaaaa aatggttagt taagccagtt gaattgacga 360

cctttgcatc ggaaatgccc cattgtctta attgtttttt cattttgtca acaaatttgg 420

gttcggttcc gcctattttt tcagctaaag caatagcggg gctattggcg ttattaacaa 480

ctaacgcact taaaagttct ttaacggtat attttctctt atcaagagga acattactaa 540

tagtatagtt tgtagtgagt tcataagggt agttagaaat agttacagga ctatcccaat 600

ttagc 605

<210> 801
<211> 713
<212> DNA
<213> Staphylococcus aureus

<400> 801
tacagtcatt tcacgcaaac tgttggccac tatgagttaa agcttgctga aggttatgaa 60

acacatttag tgggaataaa gaacaataat aacgaggtca ttgcagcttg cttacttact 120

gctgtacctg ttatgaaagt gttcaagtat ttttattcaa atcgcggtcc agtgatcgat 180

tatgaaaatc aagaactcgt acactttttc tttaatgaat tatcaaaata tgttaaaaaa 240

catcgttgtc tatacctaca tatcgatcca tatttaccat atcaatactt gaatcatgat 300

ggcgagatta caggtaatgc tggtaatggt tggttctttg ataaaatgag taacttagga 360

tttgaacata ctggattcca taaaggattt gatcctgtgc tacaaattcg ttatcactca 420

gtgttagatt taaaagataa aacagcagat gacatcatta aaaatatgga tggacttaga 480

aaaagaaaca cgaaaaaagt taaaaagaat ggtgttaaag taagatattt atctgaagaa 540

gaactaccaa tttttagatc attcatggaa gatacgtcag aatcaaaagc ttttgctgat 600

cgtgatgaca agttttatta caatcgctta aaatattaca aagaccgtgt gttagtgcct 660

ttagcgtata tcaattttga tgaatatatt aaagaactaa atgaagagcg tga 713

<210> 802
<211> 715
<212> DNA
<213> Staphylococcus aureus

<400> 802
agttgtagtt gtcgggtttg gtatatattt ttatgcttcc aaagataaag aaattaataa 60

tactattgat gcaattgaag ataaaaattt caaacaagtt tataaagata gcagttatat 120

ttctaaaagc gataatggtg aagtagaaat gactgaacgt ccgataaaaa tatataatag 180

tttaggcgtt aaagatataa acattcagga tcgtaaaata aaaaaagtat ctaaaaataa 240

aaaacgagta gatgctcaat ataaaattaa aacaaactac ggtaacattg atcgcaacgt 300

tcaatttaat tttgttaaag aagatggtat gtggaagtta gattgggatc atagcgtcat 360

tattccagga atgcagaaag accaaagcat acatattgaa aatttaaaat cagaacgtgg 420

taaaatttta gaccgaaaca atgtggaatt ggccaataca ggaacagcat atgagatagg 480

catcgttcca aagaatgtat ctaaaaaaga ttataaagca atcgctaaag aactaagtat 540

ttctgaagac tatatcaaac aacaaatgga tcaaaattgg gtacaagatg ataccttcgt 600

tccacttaaa accgttaaaa aaatggatga atatttaagt gatttcgcaa aaaaatttca 660

tcttacaact aatgaaacag aaagtcgtaa ctatcctcta ggaaaagcga cttca 715

<210> 803
<211> 360
<212> DNA
<213> Staphylococcus haemolyticus

<400> 803
gccaataagc aagttgaaat atctatggct gaatgggatg ttatgaatat aatatgggat 60

aaaaaatcag tatcagctaa tgaaattgta gttgaaattc aaaaatataa agaagttagc 120

gataaaacga ttagaacatt aatcacaaga ctatataaaa aagagattat aaaacgatac 180

aaatcagaga atatttattt ttactcatca aatattaaag aagacgatat taaaatgaaa 240

actgctaaaa cctttcttaa taaactgtat ggaggggaca tgaaaagttt agtgctgaat 300

tttgcgaaaa atgaagaatt aaataacaaa gaaattgaag aattgcgaga cattttaaat 360

<210> 804
<211> 300
<212> DNA

<213> Pseudomonas aeruginosa

<400> 804
catgcgtgta aatcatcgtc gtagagacgt cggaatggcc gagcagatcc tgcacggttc 60

gaatgtcgta accgctgcgg agcaaggccg tcgcgaacga gtggcggagg gtgtgcggtg 120

tggcgggctt cgtgatgcct gcttgttcta cggcacgttt gaaggcgcgc tgaaaggtct 180

ggtcatacat gtgatggcga cgcacgacac cgctccgtgg atcggtcgaa tgcgtgtgct 240

gcgcaaaaac ccagaaccac ggccaggaat gcccggcgcg cggatacttc cgctcaaggg 300

<210> 805
<211> 500
<212> DNA
<213> Streptococcus pneumoniae

<400> 805
tgaggaaggt agtaagggaa acaatatcaa actgaccatt gatttggcct tccaagatag 60

cgtggatgct ttactgaaaa gttatttcaa ttctgagcta gaaaatggtg gagccaagta 120

ttctgaaggt gtctatgcag tcgcccttaa cccaaaaaca ggtgcggttt tgtctatgtc 180

agggattaaa catgacttga aaacaggaga gttgacgcct gattccttgg gaacggtaac 240

caatgtcttt gttccaggtt cggttgtcaa ggcggcgacc atcagctccg gttgggaaaa 300

tggagtctta tcagggaacc agaccttgac agaccaaccg attgtcttcc aaggttcagc 360

tccgattaat tcttggtata ctcaagccta cgattcattc ccgattacag ctgtggaggc 420

cttggagtat tcttctaatg cctatatggt tcaaacggct ttgggcatta tgggtcagac 480

ctatcaaccc aatatgtttg 500

<210> 806
<211> 565
<212> DNA
<213> Staphylococcus epidermidis

<400> 806
tagcaataca atcgcacata cattaataga gaaaaagaaa aaagatggca aagatattca 60

actaactatt gatgctaaag ttcaaaagag tatttataac aacatgaaaa atgattatgg 120

ctcaggtact gctatccacc ctcaaacagg tgaattatta gcacttgtaa gcacaccttc 180

atatgacgtc tatccattta tgtatggcat gagtaacgaa gaatataata aattaaccga 240

agataaaaaa gaacctctgc tcaacaagtt ccagattaca acttcaccag gttcaactca 300

aaaaatatta acagcaatga ttgggttaaa taacaaaaca ttagacgata aaacaagtta 360

taaaatcgat ggtaaaggtt ggcaaaaaga taaatcttgg ggtggttaca acgttacaag 420

atatgaagtg gtaaatggta atatcgactt aaaacaagca atagaatcat cagataacat 480

tttctttgct agagtagcac tcgaattagg cagtaagaaa tttgaaaaag gcatgaaaaa 540

actaggtgtt ggtgaagata tacca 565

<210> 807
<211> 524
<212> DNA
<213> Streptococcus pneumoniae

<400> 807
tgaagatggc agcaagagct tgctgggaac ttctggaatg gagagttcct tgaacagtat 60

tcttgcaggg acagacggca ttattaccta tgaaaaggat cgtctgggca atattgtacc 120

cggaacagaa ctggtatcgc aacaaactgt ggatggcaag gatgtttata caacattgtc 180

tagtccgcta caatctttca tggaaactca gatggatgcc tttctagaaa aagtaaaagg 240

taagtatatg accgcgacct tggtcagtgc aaagaccggt gaaattctcg ctaccaccca 300

acgacctacc tttaatgcag atactaaaga aggaatcact gaggactttg tttggcgtga 360

tattctttat caaagtaact atgaaccagg atcagccttt aaggtcatga tgttagcttc 420

ttctattgat aataatacct tcccaagtgg agaatacttc aatagcagtg aattcaaaat 480

agcggatgcg acgactcgag attgggatgt taatgagggt ttga 524

<210> 808
<211> 715
<212> DNA
<213> Staphylococcus aureus

<400> 808
agagatgaat gcaggaacag ttttagatcc acaaatgata aaaaatgaag atgtcagtga 60

aaaagagtat gcagcagttt ctcagcaact ttccaaatta ccaggtgtta acacgtctat 120

ggattgggat agaaaatatc catatggcga tactttaaga ggtatattcg gagatgtatc 180

gacacctgct gaaggtattc caaaagaatt gacagaacat tacttatcca aaggatattc 240

acgcaatgat cgtgttggaa aatcttacct agaatatcaa tatgaagatg tattgcgtgg 300

taagaagaaa gaaatgaaat acacaacgga caaatctggt aaagttacat cttcagaagt 360

gttaaatcct ggcgctcgcg gtcaagattt gaaattaacg atcgatatag atcttcaaaa 420

agaagtagaa gcattattag ataaacaaat taagaagctt cgcagtcaag gtgccaaaga 480

tatggataat gcaatgatgg ttgtacaaaa tcctaaaaat ggagacattc ttgcgcttgc 540

cggaaagcag attaataaga gtggtaaaat gactgattat gacattggta cgtttacttc 600

tcaatttgcg gttggatctt ctgtaaaagg tggaacatta ttagccggtt atcagaataa 660

agctatcaaa gttggagaaa caatggtcga tgaaccatta catttccaag gtggt 715

<210> 809
<211> 623
<212> DNA
<213> Enterococcus faecalis

<400> 809
caaacaagaa ttagccgaag cgaagaaaac agctactaca tttttaaacg tattgtcaaa 60

acaggaattt gataagttac cgtccgttgt tcaagaagct agcttaaaga aaaatggcta 120

tgatactaaa tctgttgttg aaaaatacca agcaatttat tcagggattc aagcagaagg 180

agtcaaagct agtgatgttc aagtcaaaaa ggcgaaagac aatcaataca catttaccta 240

taaattatcg atgagcactc ctttaggcga aatgaaagat ttgtcttatc aatcaagtat 300

cgccaagaaa ggcgatacct accaaatcgc ttggaagccg tctttaattt ttccagatat 360

gtcaggaaat gataaaattt cgattcaagt agataatgcc aaacgtggag aaattgtcga 420

tcgtaatggt agtgggctag caattaacaa agtgtttgac gaagtgggcg tagtgcctgg 480

caaactcggt tctggcgcag aaaaaacagc caatatcaaa gcttttagtg ataagttcgg 540

cgtttctgtt gatgaaatca atcaaaagtt aagccaagga tgggtccaag cagactcctt 600

tgtaccaatc acagttgctt ctg 623

<210> 810
<211> 660
<212> DNA
<213> Enterococcus faecium

<400> 810
tacagatgca gacggtgtag agaaaaaagt tctgatcgaa catgaagttc aaaatggcaa 60

agatatcaaa ttgacaatcg atgcgaaggc acaaaaaaca gcttttgaca gtctaggagg 120

aaaagctgga tcaactgttg cgacaacgcc aaaaaccggt gatcttcttg cgcttgctag 180

ctctccaagc tatgatccaa acaaaatgac aaacgggatc tcacaagaag attacaaagc 240

ttatgaagaa aatcctgaac agccattcat cagccgattt gcgacaggtt atgctcctgg 300

atctacgttt aaaatgatta cagcagcaat cggtctcgac aacggcacta tcgatccaaa 360

tgaagtgttg acgatcaacg ggcttaaatg gcaaaaagac agttcttggg gatcttatca 420

agtaacgcgt gtcagtgatg tatcacaagt agacttaaaa actgctttga tctattccga 480

taatatatat acggcccaag aaacgttgaa aatgggtgag aaaaaatttc gtacaggctt 540

agataaattc atttttggtg aagaccttga tttgccaatt agtatgaatc cagcacaaat 600

ttctaatgaa gatagcttta actcagatat cttgctagct gatactggat atggacaggg 660

<210> 811
<211> 522
<212> DNA
<213> Enterococcus faecalis

<400> 811
gccggtgtat cactaaagga aaaaacagct tctctatatg aaggaagcca agtggtaaaa 60

gctaagcgag gatcaatttt agatcgatat ggtaatccaa ttgcagaaga tgctacttcc 120

tattcgttat atgtcgtatt atcaaaaaaa tatacgggac aaaataatga aaagctatac 180

gcggagaaaa aagacttcga tgatattgct gaaattttag cgaaatatac caaactagac 240

aaaaaaacag cattgaaata cttgaataat gggatccatg aagatgggtc aacacaatat 300

caagtggaat ttggtacggg tggtcaaaac atcaccttgg aaacacgcca aaaaattgaa 360

gcagatttga aaaagaaaaa aatttcaggt gtttatttca atgaacatcc agccagatta 420

tatcccaatg gtcagtttgc ttctcacttt attggctata caaaagcagc caatccagat 480

gatgataaag aaggcttagt aggagcaatg ggactagaac ag 522

<210> 812
<211> 332
<212> DNA
<213> Staphylococcus aureus

<400> 812
taataaaacg tatgaaatat catctgcaga atgggaagtt atgaatatca tttggatgaa 60

aaaatatgca agtgcgaata atataataga agaaatacaa atgcaaaagg actggagtcc 120

aaaaaccatt cgtacactta taacgagatt gtataaaaag ggatttatag atcgtaaaaa 180

agacaataaa attttttaat attactctct tgtagaagaa agtgatataa aatataaaac 240

atctaaaaac tttatcaata aagtctacaa aggcggtttc aattcacttg tcttaaactt 300

tgtagaaaaa gaagatctat cacaagatga aa 332

<210> 813
<211> 530
<212> DNA
<213> Streptococcus pneumoniae

<400> 813
cttggttagc gattcagtta gaacaaaaag caaccaagca agaaatcttg acctactata 60

taaataaggt ctacatgtct aatggcaact atggaatgca gacagcagct caaaactact 120

atggtaaaga cctcaataat ttaagtttac ctcagttagc cttgctggct ggaatgcctc 180

aggcaccaaa ccaatatgac ccctattcac atccagaagc agcccaagac cgccgaaact 240

tggtcttatc tgaaatgaaa aatcaaggct acatctctgc tgaacagtat gagaaagcag 300

tcaatacacc aattactgat ggactacaaa gtctcaaatc agcaagtaat taccctgctt 360

acatggataa ttacctcaag gaagtcatca atcaagttga agaagaaaca ggatataacc 420

tgctcacaac tgggatggat gtctacacaa atgtagacca agaagctcaa aaacatctgt 480

gggatattta caatacagac gaatacgttg cctatccaga cgatgaattg 530

<210> 814
<211> 355
<212> DNA
<213> Staphylococcus aureus

<400> 814
agcaagttga aatatctatg gctgaatggg atgttatgaa tataatatgg gataaaaaat 60

cagtatcagc taatgaaatt gtagttgaaa ttcaaaaata taaagaagtt agcgataaaa 120

cgattagaac attaatcaca agactatata aaaaagagat tataaaacga tacaaatcag 180

agaatattta tttttactca tcaaatatta aagaagacga tattaaaatg aaaactgcta 240

aaacctttct taataaactg tatggagggg acatgaaaag tttagtgctg aattttgcga 300

aaaatgaaga attaaataac aaagaaattg aagaattgcg agacatttta aatga 355

<210> 815
<211> 702
<212> DNA
<213> Escherichia coli

<400> 815
acatcgaact ggatctcaac agcggtaaga tccttgagag ttttcgcccc gaagaacgtt 60

ttccaatgat gagcactttt aaagttctgc tatgtggtgc ggtattatcc cgtgttgacg 120

ccgggcaaga gcaactcggt cgccgcatac actattctca gaatgacttg gttaagtact 180

caccagtcac agaaaagcat cttacggatg gcatgacagt aagagaatta tgcagtgctg 240

ccataaccat gagtgataac actgctgcca acttacttct gacaacgatc ggaggaccga 300

aggagctaac cgcttttttg cacaacatgg gggatcatgt aactcgcctt gatcgttggg 360

aaccggagct gaatgaagcc ataccaaacg acgagcgtga caccacgacg cctgcagcaa 420

tggcaacaac gttgcgcaaa ctattaactg gcgaactact tactctagct tcccggcaac 480

aattaataga ctggatggag gcggataaag ttgcaggacc acttctgcgc tcggcccttc 540

cggctggctg gtttattgct gataaatctg gagccggtga gcgtgggtct cgcggtatca 600

ttgcagcact ggggccagat ggtaagccct cccgtatcgt agttatctac acgacgggga 660

gtcaggcaac tatggatgaa cgaaatagac agatcgctga ga 702

<210> 816
<211> 596
<212> DNA
<213> Klebsiella oxytoca

<400> 816
tgtgcagcac cagtaaagtg atggccgccg ccgcggtatt aaaacagagc gaaagcaata 60

aagaggtggt aaataaaagg ctggagatta acgcagccga tttggtggtc tggagtccga 120

ttaccgaaaa acatctccag agcggaatga cgctggctga gctaagcgcg gcgacgctgc 180

aatatagcga caatacggcg atgaatctga tcatcggcta ccttggcggg ccggaaaaag 240

tcaccgcctt cgcccgcagt atcggcgatg ccacctttcg tctcgatcgt acggagccca 300

cgctgaatac cgccatcccg ggcgatgagc gtgataccag cacgccgctg gcgatggctg 360

aaagcctacg caagctgacg cttggcgatg cgctgggcga acagcaacgc gcccagttag 420

tcacctggct gaaaggcaat accaccggcg ggcaaagcat tcgcgcgggc ctgcctgaaa 480

gctgggtggt cggcgataaa accggcgccg gagattacgg caccaccaat gatattgcgg 540

ttatctggcc ggaagatcac gctccgctgg tattagtcac ctactttacc cagccg 596

<210> 817
<211> 558
<212> DNA
<213> Enterococcus faecium

<400> 817
acagtgccag ttcttatcgt ttattgcaag ccgatgaaaa tacaaaaagt ctattattgc 60

gtcaactaat tttcatattt ttgagttgga gcgtgatctt cttagctcgt tcagtcaaac 120

tacactattt acttcaccct aaaatagcag gatacggttt agccttatcg attttctttt 180

tagtattagt aagaataggg atattcggtg tcactgtcaa cggcgcacaa cgttggatct 240

ctctgtttgg cattcaattc cagccttctg aactggcaaa tctttttttg atttttttatt 300

taagctggtt ttttcgtgac ggaaatagta gcccaaaaga tctaaaaaaa ccattcctga 360

ttacagtagg tataactttt ctgattttat ttcagccaaa gattgctgga gcattgatga 420

tcctttcgat tgcgtgggtc atattttggg cagcggcggt tccatttaaa aaagggatct 480

atctaatcgt tactttttct gcattgctga ttggagcagc aggcggggta ttatatttag 540

gaaataaagg ttggcttc 558

<210> 818
<211> 750
<212> DNA
<213> Staphylococcus aureus

<400> 818
ctcacccaaa tggagattta ttacaattaa cgaaatgggc agaaacaaag aaattaactg 60

gatggtacgc gcgaagaatc gctgtaggtc gtgacggtga agttcagggt gttgcgcaat 120

tactttttaa aaaagtacct aaattaccgt atacgctatg ttatatttca cgtggttttg 180

ttgttgatta tagtaataaa gaagcgttaa atgcattgtt agacagtgca aaagaaattg 240

ctaaagctga gaaagcgtat gcaattaaaa tcgatcctga tgttgaagtt gataaaggta 300

cagatgcttt gcaaaatttg aaagcgcttg gttttaaaca taaaggattt aaagaaggtt 360

tatcaaaaga ctacatccaa ccacgtatga ctatgattac accaattgat aaaaatgatg 420

atgagttatt aaatagtttt gaacgccgaa atcgttcaaa agtgcgcttg gctttaaagc 480

gaggtacgac agtagaacga tctgatagag aaggtttaaa aacatttgct gaattaatga 540

aaatcactgg ggaacgcgat ggcttcttaa cgcgtgatat tagttacttt gaaaatattt 600

atgatgcgtt gcatgaagat ggagatgctg aactattttt agtaaagttg gacccaaaag 660

aaaatatagc gaaagtaaat caagaattga atgaacttca tgccgaaata gctaaatggc 720

agcagaagat ggaaacatct gaaaagcaag 750

<210> 819
<211> 363
<212> DNA
<213> Proteus vulgaris

<400> 819

acaacatttc gccaaacagc gacgattgca gtttcattaa tatctctatt ggtatctcca 60

atgctatggg ctaacaccaa taatacgatt gaagagcaat taagtacgct tgaaaaatat 120

agccaaggtc gtttaggtgt tgctttaatc aacacggaag ataattcaca aataacatat 180

cgtggtgaag aacgttttgc gatggcaagt acaagtaagg ttatggctgt tgcggcagtt 240

ttaaaagaga gtgaaaaaca agcgggatta ttagataaga atattacaat taaaaaatcc 300

gacttagttg cttacagccc tattacagaa aaacatttag taacaggaat gtctttagct 360

caa 363

<210> 820
<211> 545
<212> DNA
<213> Staphylococcus haemolyticus

<400> 820
aatgatggct ttgaagtagt gttactaggt gtaaaagatg aaagcaataa agtattagct 60

gctagtcttt tctctaaaat accgaccatg ggaagttatg tatattactc aaatcgaggc 120

ccagtaatgg actattctga tttaggctta gttgattttt acttacgcga attagaaaag 180

tatttacatc aacaccaatg tttatacgtt aaaattgatc catactggat ttatcaaatt 240

tatgataaag atattaatcc acttgaagat agagagaaaa atgatgctat agttaatttg 300

tttaaatcac atggatatga acaccatgga tttactactg aatatgacac atcaagtcaa 360

gcaagatgga tgggtgttag ctatctaaaa ggggaaacac ctgcttcatt aagaaaacaa 420

tttgatagcc aacgtaaaag aaatattaat aaagcgataa actatggggt gaaagtaaga 480

ttccttggta gagatgagtt tcatatattc ttagacttat accgtgaaac agaagcaaga 540

acagg 545

<210> 821
<211> 633
<212> DNA
<213> Pseudomonas aeruginosa

<400> 821
ccatcaggca acagaatgat acctaaatca ttagtggccg cagtttttcc ggctttgata 60

cccgaagtac cagttttatg tgcgaccaca gtaccagctg gtaacaaacc ttttaaccgc 120

tctggtcctg tggtggtttc gaccatccac ttccataaca aagcctgcga ggtttcagac 180

agctgtgttt tttgctcaaa ctttttcagg atctctgcag cacctttcat cgaggtccag 240

ttttgatact gcacctgatc atcggcgtgc atctgcgctt catttgcgac cacagcggtc 300

tcctttatac ccatagactg gatatagtca tgcaaagcag ctggtccacc aaccagttca 360

aataacaaat cacaggccac gttatcgctg tgcgagaccg agtattgcag cagttgctgc 420

actggaacac taaactcgtc tccctgatac gctttcatta tcggagccca ggtattctgt 480

aaaaccttag ccctgtttac gataacggtc tgatttaaat ccaactttcc ctgatcaacc 540

tgatgcagta ccaacatagc taaatgcaat ttaaatacac tttgcattgg gaatttttca 600

aaaggattaa tcagtaaagg ttccagatcg tca 633

<210> 822
<211> 340
<212> DNA
<213> Klebsiella oxytoca

<400> 822
cttactatcg gagctggtca ccggtttatc cggcagggac tcatcgccag tattccaacc 60

ccagcatagg cctgtttggt cacctggccg caaatagtct gggccagcca tttgagcaac 120

tgatgagcca gaccctgctg cccaagctgg gtttgcacca cacctatatc caggtgccgg 180

agtcggccat ggcgaactat gcctacggct attcgaagga agataagccc atccgggtca 240

ctccgggcgt gctggcggcc gaggcttacg ggatcaagac cggctcggcg gatctgctga 300

agtttgccga ggcaaacatg ggtatcagg gagatgccct 340

<210> 823
<211> 768
<212> DNA
<213> Proteus vulgaris

<400> 823
tcactcatta accattgctg aaatatttcc attgatgctg tcattggctt tgattttaaa 60

tatgttagcc aatattttcc catttcaact tctattttaa agggttgcac taactgacca 120

ttttcaattt ctcttgaaaa catttttgct ggtgctaatg caactcctcc ttcataaata 180

gcgctttcaa tcattaagcg tgaagagtca aaaatagagc ccgttatttt tataggcgac 240

atatttgctt tttcaaacca ttgcaaccac tcatcttctc gataagagcg atacaagttt 300

tcatttatta gatcagttgg atgttgtaaa cgtttcgccg tacccgatga acacaatacc 360

gttaatggtg cagaaaataa tgctttgtta tgagttaatg gccataaacc ttcaccaaat 420

cgaatagcaa aatctaatcc ttcagtagcc aaattgacca cattattatt tgttcttaaa 480

ttcacttcta ttcttggata taactgccta aattcggcca acctaggtaa taaccaccca 540

accgcaaatg taccgacagc tgcaattgaa acaacatcgc gatattcacc gcgttcaaat 600

tgtttaaata cacgctcaat atcactaaaa gccgttgtta atacagaaaa taagatttga 660

gcatcatccg tcatttctaa acctcgaggt aagcgcttaa aaagaataac gccaagccgc 720

tcttctaaca ttctcacttg ttggctaaca gcaccttgag tgacatac 768

<210> 824
<211> 568
<212> DNA
<213> Enterococcus faecium

<400> 824
ttatctgttt tgttactgct tacactagta gtcggctttt tttcgattga atttgtccat 60

ggattttcgt ctgcaaaaca gacctcaacc gtaaaaaagg tagatccgaa aagtgtccct 120

accacactaa atgtggcttt gattggttcg gatgcccggt cgaaagaaga aaatggtcgc 180

tcagattcac ttatggttgc acaatacgac cagaaaacac aacaagcaaa actaatctct 240

atcatgagag actcatatgt cgatatacca ggttacggaa tggataaaat caatgcagcg 300

tactcttacg gaggaattga tttattgaac caaacattaa aggaaaattt caaatttgaa 360

gccccgtatt atgcaagtat cacatttcaa gattttatcg attgcgtcaa tgaactgttt 420

cctgatggag taaagattga tgcagaaaaa tctttagatt tagatggcgt atatataaaa 480

aaagggaagc aagtaatgga tggcaatacg ttactgcagt atgctcgatt ccgtgaagac 540

gaagaagggg actttgggag gattagaa 568

<210> 825
<211> 763
<212> DNA
<213> Staphylococcus aureus

<400> 825
tgacttcgga tgagttcaat gcgtttacaa caaagcattt ttcacattac acacaatcag 60

ctattcatta caatcataga gttgatttaa aaggcgatgt gcatcttgta ggggttaaag 120

atgacaatgg tcaagtgatt gcaggatgct tattgacaga agcacgcaca cttaaatttt 180

tcaaatattt ttatacacat cgcgggccag tgatggatta tacaaatcaa tcattagtag 240

catttttctt taaagcatta acgtcatatt taaagaaaca caattgttta tatgtccttg 300

tagatccata tttaattgaa aatttacgca atgcagacgg tgaaattgtt aaatcttatg 360

ataaccgagc atttgttaga acaatggata aattaggtta taaacaccaa ggtttccctg 420

taggttatga ttcaatgagc caaatccgtt ggctgtcagt gttagattta aaagataaga 480

ctgaagacca acttttaaaa gaaatggatt atcaaacgag acgtaatatt aaaaaaacat 540

atgatattgg tgtcaaaact aaaacgttaa cgattgatga aacgcaaact tttttcgact 600

tattccatat ggctgaggaa aagcacggtt tcaaattccg tgagttacca tactttgaag 660

aaatgcaaaa gttatacgat gaccacgcca tgttaaagtt ggcgtatatt gatttaaacg 720

agtatttaaa aacgttacaa ttaaagcaac aacaattaac agc 763

<210> 826
<211> 552
<212> DNA
<213> Staphylococcus epidermidis

<400> 826
aagtataatc agttcattgc tcacgatatg tgtaattttt ttagtgagaa tgctctatat 60

aaaatatact caaaatatta tgtcacataa gatttggtta ttagtgctcg tctccacgtt 120

aattccatta ataccatttt acaaaatatc gaattttaca ttttcaaaag atatgatgaa 180

tcgaaatgta tctgacacga cttcttcggt tagtcatatg ttagatggtc aacaatcatc 240

tgttacgaaa gacttagcaa ttaatgttaa tcagtttgag acctcaaata taacgtatat 300

gattcttttg atatgggtat ttggtagttt gttgtgctta ttttatatga ttaaggcatt 360

ccgacaaatt gatgttatta aaagttcgtc attggaatcg tcatatctta atgaacgact 420

taaagtatgt caaagtaaga tgcagttcta caaaaagcat ataacaatta gttatagttc 480

aaacattgat aatccgatgg tatttggttt agtgaaatcc caaattgtac taccaactgt 540

cgtagtcgaa ac 552

<210> 827
<211> 810
<212> DNA
<213> Staphylococcus aureus

<400> 827
tgctttagtt ttaagtgcat gtaattcaaa cagttcacat gccaaagagt taaatgattt 60

agaaaaaaaa tataatgctc atattggtgt ttatgcttta gatactaaaa gtggtaagga 120

agtaaaattt aattcagata agagatttgc ctatgcttca acttcaaaag cgataaatag 180

tgctattttg ttagaacaag taccttataa taagttaaat aaaaaagtac atattaacaa 240

agatgatata gttgcttatt ctcctatttt agaaaaatat gtaggaaaag atatcacttt 300

aaaagcactt attgaggctt caatgacata tagtgataat acagcaaaca ataaaattat 360

aaaagaaatc ggtggaatca aaaaagttaa acaacgtcta aaagaactag gagataaagt 420

aacaaatcca gttagatatg agatagaatt aaattactat tcaccaaaga gcaaaaaaga 480

tacttcaaca cctgctgctt tcggtaagac tttaaataaa cttatcgcaa atggaaaatt 540

aagcaaagaa aacaaaaaat tcttacttga tttaatgtta aataataaaa gcggagatac 600

tttaattaaa gacggtgttc caaaagacta taaggttgct gataaaagtg gtcaagcaat 660

aacatatgct tctagaaatg atgttgcttt tgtttatcct aagggccaat ctgaacctat 720

tgttttagtc atttttacga ataaagacaa taaaagtgat aagccaaatg ataagttgat 780

aagtgaaacc gccaagagtg taatgaagga 810

<210> 828
<211> 565
<212> DNA
<213> Plasmid RGN238

<400> 828
tttgaaggaa ctgaaggttg ttttttactt tacgatgcat ccacaaacgc tgaaattgct 60

caattcaata aagcaaagtg tgcaacgcaa atggcaccag attcaacttt caagatcgca 120

ttatcactta tggcatttga tgcggaaata atagatcaga aaaccatatt caaatgggat 180

aaaacccccca aaggaatgga gatctggaac agcaatcata caccaaagac gtggatgcaa 240

ttttctgttg tttgggtttc gcaagaaata acccaaaaaa ttagattaaa taaaatcaag 300

aattatctca aagattttga ttatggaaat caagacttct ctggagataa agaaagaaac 360

aacggattaa cagaagcatg gctcgaaagt agcttaaaaa tttcaccaga agaacaaatt 420

caattcctgc gtaaaattat taatcacaat ctcccagtta aaaactcagc catagaaaac 480

accatagaga acatgtatct acaagatctg gataatagta caaaactgta tgggaaaact 540

ggtgcaggat tcacagcaaa tagaa 565

<210> 829
<211> 226
<212> DNA
<213> Klebsiella pneumoniae

<400> 829
ggcttacggg atcaagaccg gctcggcgga tctgctgaag tttgccgagg caaacatggg 60

gtatcaggga gatgccgcgg taaaaagcgc gatcgcgctc acccacaccg gtttctactc 120

ggtgggagac atgacccagg gactgggctg ggagagttac gcctatccgg tgaccgagca 180

gacattgctg gcgggtaacg caccggcggt gagcttccag gccaat 226

<210> 830
<211> 502
<212> DNA
<213> Proteus mirabilis

<400> 830
gcggtaagat ccttgagagt tttcgccccg aagaacgttt tccaatgatg agcactttta 60

aagttctgct atgtggtgcg gtattatccc gtgttgacgc cgggcaagag caactcggtc 120

gccgcataca ctattctcag aatgacttgg ttaagtactc accagtcaca gaaaagcatc 180

ttacggatgg catgacagta agagaattat gcagtgctgc cataaccatg agtgataaca 240

ctgcggccaa cttacttctg acaacgatcg gaggaccgaa ggagctaacc gctttttgc 300

acaacatggg ggatcatgta acccgccttg atcgttggga accggagctg aatgaagcca 360

taccaaacga cgagcgtgac accacgacgc ctgcagcaat ggcaacaacg ttgcgcaaac 420

tattaactgg cgaactactt actctagctt cccggcaaca attaatagac tggatggagg 480

cggataaagt tgcaggacca ct 502

<210> 831
<211> 391
<212> DNA
<213> Staphylococcus warneri

<400> 831
agttgaaaat gaaatatgta taagaacttt aatagatgat gattttcctt tgatgttaaa 60

atggttaact gatgaaagag tattagaatt ttatggtggt agagataaaa aatatacatt 120

agaatcatta aaaaaacatt atacagagcc ttgggaagat gaagttttta gagtaattat 180

tgaatataac aatgttccta ttggatatgg acaaatatat aaaatgtatg atgagttata 240

tactgattat cattatccaa aaactgatga gatagtctat ggtatggatc aatttatagg 300

agagccaaat tattggagta aaggaattgg tacaagatat attaaattga tttttgaatt 360

tttgaaaaaa gaaagaaatg ctaatgcagt t 391

<210> 832
<211> 380
<212> DNA

<213> Pseudomonas aeruginosa

<400> 832
tcattcgcac atgtaggctc ggccctgacc aagtccaatc catgcgggct gctcttgatc 60

ttttcggtcg tgagttcgga gacgtagcca cctactccca acatcagccg gactccgatt 120

acctcgggaa cttgctccgt agtaggacat tcatcgcgct tgctgccttc gagcaagaag 180

cggttgttgg cgctctcgcg gcttacgttc tgcccaagtt tgagcaggcg cgtagtgaga 240

tctatatcta tgatctcgca gtctccggcg agcaccgccg gcagggcatt gccaccgcgc 300

tcatcaatct cctcaagcat gaggccaacg cgcttggtgc ttacgtgatc tacgtgcaag 360

cggattacgg tgacgatccc 380

<210> 833
<211> 616
<212> DNA
<213> Escherichia coli

<400> 833
gaccgatcac cctacgagga gactcgtaat ggcgctcggt tggatgacaa aacccgccgt 60

acctggccgc cgttcgatcc cgcaacggcc gggacttacc gtgggttcgg cctgctgaat 120

cagtttctgg ttcaagcccc cggcgcgcgg cgcagcgcgc accccgatgc atcgatggtc 180

gcggttggtc cactggctga aacgctgacg gagcctcaca agctcggtca cgccttgggg 240

gaagggtcgc ccgtcgagcg gttcgttcgc cttggcggga aggccctgct gttgggtgcg 300

ccgctaaact ccgttaccgc attgcactac gccgaggcgg ttgccgatat ccccaacaaa 360

cggcgggtga cgtatgagat gccgatgctt ggaagcaacg gcgaagtcgc ctggaaaacg 420

gcatcggatt acgattcaaa cggcattctc gattgctttg ctatcgaagg aaagccggat 480

gcggtcgaaa ctatagcaaa tgcttacgtg aagctcggtc gccatcgaga aggtgtcgtg 540

ggctttgctc agtgctacct gttcgacgcg caggacatcg tgacgttcgg cgtcacctat 600

cttgagaagc atttcg 616

<210> 834
<211> 707
<212> DNA
<213> Escherichia coli

<400> 834
aagtttcatt gccagacggg acttctgcaa tcgtcaaggg attgaaacct atagaagaca 60

ttgctgatga actgcgcggg gccgactatc tggtatggcg caatgggagg ggagcagtcc 120

ggttgctcgg tcgtgagaac aatctgatgt tgctcgaata tgccggggag cgaatgctct 180

ctcacatcgt tgccgagcac ggcgactacc aggcgaccga aattgcagcg gaactaatgg 240

cgaactgtat gcccgcatct gaggacccct gccttctgcc cttctcccga tccgggatcg 300

ctttgcagct ttgtttcagc gggcgcgcga atgatcaaaa cgcaggttgt caaactgact 360

acgtccacgc ggcgattata gccgatcaaa tgatgagcaa tgcctcggaa ctgcgtgggc 420

tacatggcga tctgcatcat gaaaacatca tgttctccag tcgcggctgg ctggtgaaag 480

atcccgtcgg tctggtcggt gaagtgggct ttggcgccgc aaatatgttc tacgatccgg 540

ctgacagaga cgacctttgt ctcgatccta gacgcattgc acagatggcg gacgcattct 600

ctcgtgcgct ggacgtcgat ccgcgtcgcc tgctcgaaca ggcgtacgct tatgggtgcc 660

tttccgcagc ttggaacgcg gatggagaag aggagcaacg cagtcta 707

<210> 835
<211> 545
<212> DNA
<213> Enterococcus faecalis

<400> 835
gccgaagtat cgactcaact atcagaggta gttggcgtca tcgagcgcca tctcgaaccg 60

acgttgctgg ccgtacattt gtacggctcc gcagtggatg gcggcctgaa gccacacagt 120

gatattgatt tgctggttac ggtgaccgta aggcttgatg aaacaacgcg gcgagctttg 180

atcaacgacc ttttggaaac ttcggcttcc cctggagaga gcgagattct ccgcgctgta 240

gaagtcacca ttgttgtgca cgacgacatc attccgtggc gttatccagc taagcgcgaa 300

ctgcaatttg gagaatggca gcgcaatgac attcttgcag gtatcttcga gccagccacg 360

atcgacattg atctggctat cttgctgaca aaagcaagag aacatagcgt tgccttggta 420

ggtccagcgg cggaggaact ctttgatccg gttcctgaac aggatctatt tgaggcgcta 480

aatgaaacct taacgctatg gaactcgccg cccgactggg ctggcgatga gcgaaatgta 540

gtgct 545

<210> 836
<211> 515
<212> DNA
<213> Escherichia coli

<400> 836
gcaggtcaca ttgatacaca aaattctagc tgcggcagat gagcgaaatc tgccgctctg 60

gatcggtggg ggctgggcga tcgatgcacg gctagggcgt gtaacacgca agcacgatga 120

tattgatctg acgtttcccg gcgagaggcg cggcgagctc gaggcaatag ttgaaatgct 180

cggcgggcgc gtcatggagg agttggacta tggattctta gcggagatcg gggatgagtt 240

acttgactgc gaacctgctt ggtgggcaga cgaagcgtat gaaatcgcgg aggctccgca 300

gggctcgtgc ccagaggcgg ctgagggcgt catcgccggg cggccagtcc gttgtaacag 360

ctgggaggcg atcatctggg attactttta ctatgccgat gaagtaccac cagtggactg 420

gcctacaaag cacatagagt cctacaggct cgcatgcacc tcactcgggg cggaaaaggt 480

tgaggtcttg cgtgccgctt tcaggtcgcg atatg 515

<210> 837
<211> 502
<212> DNA
<213> Staphylococcus aureus

<400> 837
gctattggtg tttatggctc tcttggtcgt cagactgatg ggccctattc ggatattgag 60

atgatgtgtg tcatgtcaac agaggaagca gagttcagcc atgaatggac aaccggtgag 120

tggaaggtgg aagtgaattt tgatagcgaa gagattctac tagattatgc atctcaggtg 180

gaatcagatt ggccgcttac acatggtcaa tttttctcta ttttgccgat ttatgattca 240

ggtggatact tagagaaagt gtatcaaact gctaaatcgg tagaagccca aacgttccac 300

gatgcgattt gtgcccttat cgtagaagag ctgtttgaat atgcaggcaa atggcgtaat 360

attcgtgtgc aaggaccgac aacatttcta ccatccttga ctgtacaggt agcaatggca 420

ggtgccatgt tgattggtct gcatcatcgc atctgttata cgacgagcgc ttcggtctta 480

actgaagcag ttaagcaatc ag 502

<210> 838
<211> 452
<212> DNA
<213> Pseudomonas aeruginosa

<400> 838
gctaaatcga tctcatatcg tcgagtggtg gggcggagaa gaagcacgcc cgacacttgc 60

tgacgtacag gaacagtact tgccaagcgt tttagcgcaa gagtccgtca ctccatacat 120

tgcaatgctg aatggagagc cgattgggta tgcccagtcg tacgttgctc ttggaagcgg 180

ggacggatgg tgggaagaag aaaccgatcc aggagtacgc ggaatagacc agtcactggc 240

gaatgcatca caactgggca aaggcttggg aaccaagctg gttcgagcac tggttgagtt 300

gctgttcaat gatcccgagg tcaccaagat ccaaacggac ccgtcgccga gcaacttgcg 360

agcgatccga tgctacgaga aagcggggtt tgagaggcaa ggtaccgtaa ccaccccaga 420

tggtccagcc gtgtacatgg ttcaaacacg cc 452

<210> 839
<211> 565
<212> DNA
<213> Escherichia coli

<400> 839
ctcatttggc tcaaaggtcg aggtgtggct tgccccgagg tgatcaactg gcaggaggaa 60

caggagggtg catgcttggt gataacggca attccgggag taccggcggc tgatctgtct 120

ggagcggatt tgctcaaagc gtggccgtca atggggcagc aacttggcgc tgttcacagc 180

ctatcggttg atcaatgtcc gtttgagcgc aggctgtcgc gaatgttcgg acgcgccgtt 240

gatgtggtgt cccgcaatgc cgtcaatccc gacttcttac cggacgagga caagagtacg 300

ccgcagctcg atcttttggc tcgtgtcgaa cgagagctac cggtgcggct cgaccaagag 360

cgcaccgata tggttgtttg ccatggtgat ccctgcatgc cgaacttcat ggtggaccct 420

aaaactcttc aatgcacggg tctgatcgac cttgggcggc tcggaacagc agatcgctat 480

gccgatttgg cactcatgat tgctaacgcc gaagagaact gggcagcgcc agatgaagca 540

gagcgcgcct tcgctgtcct attca 565

<210> 840
<211> 707
<212> DNA
<213> Staphylococcus aureus

<400> 840
gagaatatca ccggaattga aaaaactgat cgaaaaatac cgctgcgtaa aagatacgga 60

aggaatgtct cctgctaagg tatataagct ggtgggagaa aatgaaaacc tatatttaaa 120

aatgacggac agccggtata aagggaccac ctatgatgtg gaacgggaaa aggacatgat 180

gctatggctg gaaggaaagc tgcctgttcc aaaggtcctg cactttgaac ggcatgatgg 240

ctggagcaat ctgctcatga gtgaggccga tggcgtcctt tgctcggaag agtatgaaga 300

tgaacaaagc cctgaaaaga ttatcgagct gtatgcggag tgcatcaggc tctttcactc 360

catcgacata tcggattgtc cctatacgaa tagcttagac agccgcttag ccgaattgga 420

ttacttactg aataacgatc tggccgatgt ggattgcgaa aactgggaag aagacactcc 480

atttaaagat ccgcgcgagc tgtatgattt tttaaagacg gaaaagcccg aagaggaact 540

tgtcttttcc cacggcgacc tgggagacag caacatcttt gtgaaagatg gcaaagtaag 600

tggctttatt gatcttggga gaagcggcag ggcggacaag tggtatgaca ttgccttctg 660

cgtccggtcg atcagggagg atatcgggga agaacagtat gtcgagc 707

<210> 841
<211> 329
<212> DNA
<213> Pseudomonas aeruginosa

<400> 841
cctgaccaag tccaatccat gcgggctgct cttgatcttt tcggtcgtga gttcggagac 60

gtagccacct actcccaaca tcagccggac tccgattacc tcgggaactt gctccgtagt 120

aggacattca tcgcgcttgc tgccttcgag caagaagcgg ttgttggcgc tctcgcggct 180

tacgttctgc ccaagtttga gcaggcgcgt agtgagatct atatctatga tctcgcagtc 240

tccggcgagc accgccggca gggcattgcc accgcgctca tcaatctcct caagcatgag 300

gccaacgcgc ttggtgctta cgtgatcta 329

<210> 842
<211> 423
<212> DNA
<213> Pseudomonas aeruginosa

<400> 842
tgcgatgctc tatgagtggc taaatcgatc tcatatcgtc gagtggtggg gcggagaaga 60

agcacgcccg acacttgctg acgtacagga acagtacttg ccaagcgttt tagcgcaaga 120

gtccgtcact ccatacattg caatgctgaa tggagagccg attgggtatg cccagtcgta 180

cgttgctctt ggaagcgggg acggatggtg ggaagaagaa accgatccag gagtacgcgg 240

aatagaccag tcactggcga atgcatcaca actgggcaaa ggcttgggaa ccaagctggt 300

tcgagcactg gttgagttgc tgttcaatga tcccgaggtc accaagatcc aaacggaccc 360

gtcgccgagc aacttgcgag cgatccgatg ctacgagaaa gcggggtttg agaggcaagg 420

tac 423

<210> 843
<211> 613

<212> DNA
<213> Staphylococcus aureus

<400> 843
agatttgcca gaacatgaat tacacgaggg caaaaaagaa gattgttatt taatggaata 60
tagatatgat gataatgcca caaatgttaa ggcaatgaaa tatttaattg agcattactt 120
tgataatttc aaagtagata gtattgaaat aatcggtagt ggttatgata gtgtggcata 180
tttagttaat aatgaataca tttttaaaac aaaatttagt actaataaga aaaaaggtta 240
tgcaaaagaa aaagcaatat ataatttttt aaatacaaat ttagaaacta atgtaaaaat 300
tcctaatatt gaatattcgt atattagtga tgaattatct atactaggtt ataaagaaat 360
taaaggaact tttttaacac cagaaattta ttctactatg tcagaagaag aacaaaattt 420
gttaaaacga gatattgcca gtttttaag acaaatgcac ggtttagatt atacagatat 480
tagtgaatgt actattgata ataaacaaaa tgtattagaa gagtatatat tgttgcgtga 540
aactatttat aatgatttaa ctgatataga aaaagattat atagaaagtt ttatggaaag 600
actaaatgca aca 613

<210> 844
<211> 424
<212> DNA
<213> Staphylococcus aureus

<400> 844
atatcaggaa agattggaaa tacggattct gttagaccac ttgaagttac ggttataaat 60
aggagtgaag ttgtcccttg gcaatatcct ccaaaaagag aatttatata cggtgagtgg 120
ctcaggggtg aatttgagaa tggacaaatt caggaaccaa gctatgatcc tgatttggct 180
attgttttag cacaagcaag aaagaatagt atttctctat ttggtcctga ttcttcaagt 240
atacttgtct ccgtaccttt gacagatatt cgaagagcaa ttaaggattc tttgccagaa 300
ctaattgagg ggataaaagg tgatgagcgt aatgtaattt taaccctagc tcgaatgtgg 360
caaacagtga ctactggtga aattacctcg aaagatgtcg ctgcagaatg ggctatacct 420
cttt 424

<210> 845
<211> 532
<212> DNA
<213> synthetic construct

<400> 845

aagatacgga aggaatgtct cctgctaagg tatataagct ggtgggagaa aatgaaaacc 60

tatatttaaa aatgacggac agccggtata aagggaccac ctatgatgtg gaacgggaaa 120

aggacatgat gctatggctg gaaggaaagc tgcctgttcc aaaggtcctg cactttgaac 180

ggcatgatgg ctggagcaat ctgctcatga gtgaggccga tggcgtcctt tgctcggaag 240

agtatgaaga tgaacaaagc cctgaaaaga ttatcgagct gtatgcggag tgcatcaggc 300

tctttcactc catcgacata tcggattgtc cctatacgaa tagcttagac agccgcttag 360

ccgaattgga ttacttactg aataacgatc tggccgatgt ggattgcgaa aactgggaag 420

aagacactcc atttaaagat ccgcgcgagc tgtatgattt tttaaagacg gaaaagcccg 480

aagaggaact tgtcttttcc cacggcgacc tgggagacag caacatcttt gt 532

<210> 846
<211> 200
<212> DNA
<213> Staphylococcus aureus

<400> 846
acacagtcaa aactttatta cttcaaaaca taatatagat aaaataatga caaatataag 60

attaaatgaa catgataata tctttgaaat cggctcagga aaagggcatt ttacccttga 120

attagtacag aggtgtaatt tcgtaactgc cattgaaata gaccataaat tatgcaaaac 180

tacagaaaat aaacttgttg 200

<210> 847
<211> 510
<212> DNA
<213> Enterococcus faecium

<400> 847
cgtttaccaa aggagaaggt gaccaatact ctgatataga gttctatata tttttgaaac 60

atagtataac ctcgaacttt gattcatcca actggttgtt tgacgtagct ccgtacttga 120

tgctttataa aaatgagtac ggaacagagg tagttatttt tgataatctt atacgtgggg 180

aatttcattt cctttctgaa aaagatatga acataatccc ctcgtttaaa gattcaggtt 240

atattcctga tacgaaggct atgcttattt acgatgaaac agggcaatta gaaaattatt 300

tatcagagat aagtggtgca agaccaaata gacttactga agaaaatgct aatttttttgt 360

tgtgtaattt ctctaatcta tggttgatgg gaatcaacgt tctaaaaaga ggagaatatg 420

ctcgttcatt agaactctta tcacaacttc aaaaaaatac actacaactt atacgtatgg 480

cagaaaaaaa tgctgataat tggctaaaca 510

<210> 848
<211> 227
<212> DNA
<213> Staphylococcus aureus

<400> 848
gtgattacag aaatgaaagc agggcacctg aaagatatcg ataaacccag cgaaccattt 60

gaggtgatag gtaagattat accgaggtat gaaaacgaga attggacctt tacagaatta 120

ctctatgaag cgccatattt aaaaagctac caagacgaag aggatgaaga ggatgaggag 180

gcagattgcc ttgaatatat tgacaatact gataaggtaa tatatct 227

<210> 849
<211> 708
<212> DNA
<213> Staphylococcus aureus

<400> 849
gacagatttt cgatccctta atattgaaaa tctttatgct tatcaatttg aaaaaatagc 60

acttattgga ggtaatggta ctggcaaaac cacattactg aatatgattg ctcaaaaaac 120

aaaaccagaa tctggaacgg ttgaaacgga tggcgaaatt caatattttg aacagcttaa 180

catggatgtg gaaaatgatt ttaacacgtt agacggtagt ttaatgagtg aactccatat 240

acctatgcat acaaccgaca gtatgagtgg tggtgaaaaa gcaaaatata aattagctaa 300

tgtcatatca aattatagtc cgatattact tttagatgaa cctacaaatc acttggataa 360

aattggtaaa gattatctga ataatatttt aaaatattac tatggtactt taattatagt 420

aagtcatgat agagcactta tagaccaaat tgctgacaca atttgggata tacaagaaga 480

tggcacaata agagtgttta aaggtaatta cacacagtat caaaatcaat atgaacaaga 540

acagttagaa caacaacgtc aatatgaaca gtatataagt gaaaaacaaa gattgtccca 600

agccagtaaa gctaaacgaa atcaagcgca acaaatggca caagcatcat caaaacaaaa 660

aaataaaagt atagcaccag atcgtttaag tgcatcaaaa caaaaagg 708

<210> 850
<211> 259
<212> DNA
<213> Staphylococcus aureus

<400> 850
gatataggat acaaaataga agttgattgg atgccttcac gtatggaact taaacataaa 60

gaatatggat atttagatat tcatcccata aatctaaatg atgatggttc aattactcaa 120

gcaaaccccg aaggtggcaa ttacgttttt caaaatgaat ggttctcaga aactaattat 180

aaaggccgaa aaataccatg tatttcaaaa gaagctcaac ttctttttca ttctggttat 240

gacttaacag aaaaagacc 259

<210> 851
<211> 544
<212> DNA
<213> Staphylococcus aureus

<400> 851
catttaacga cgaaactggc taaaataagt aaacaggtaa cgtctattga attagacagt 60

catctattca acttatcgtc agaaaaatta aaactgaaca ttcgtgtcac tttaattcac 120

caagatattc tacagtttca attccctaac aaacagaggt ataaaattgt tgggaatatt 180

ccttaccatt taagcacaca aattattaaa aaagtggttt ttgaaagcca tgcgtctgac 240

atctatctga ttgttgaaga aggattctac aagcgtacct tggatattca ccgaacacta 300

gggttgctct tgcacactca agtctcgatt cagcaattgc ttaagctgcc agcggaatgc 360

tttcatccta aaccaaaagt aaacagtgtc ttaataaaac ttacccgcca taccacagat 420

gttccagata aatattggaa gctatatacg tactttgttt caaaatgggt caatcgagaa 480

tatcgtcaac tgtttactaa aaatcagttt catcaagcaa tgaaacacgc caaagtaaac 540

aatt 544

<210> 852
<211> 614
<212> DNA
<213> Staphylococcus aureus

<400> 852
ccagaaaaac cctaaagaca cgcaaaattt tattacttct aaaaagcatg taaaagaaat 60

attgaatcac acgaatatca gtaaacaaga caacgtaata gaaatcggat caggaaaagg 120

acattttacc aaagagctag tcaaaatgag tcgatcagtt actgctatag aaattgatgg 180

aggcttatgt caagtgacta aagaagcggt aaacccctct gagaatataa aagtgattca 240

aacggatatt ctaaaatttt ccttcccaaa acatataaac tataagatat atggtaatat 300

tccttataac atcagtacgg atattgtcaa aagaattacc tttgaaagtc aggctaaata 360

tagctatctt atcgttgaga agggatttgc gaaaagattg caaaatctgc aacgagcttt 420

gggtttacta ttaatggtgg agatggatat aaaaatgctc aaaaaagtac caccactata 480

ttttcatcct aagccaagtg tagactctgt attgattgtt cttgaacgac atcaaccatt 540

gatttcaaag aaggactaca aaaagtatcg atcttttgtt tataagtggg taaaccgtga 600

atatcgtgtt cttt 614

<210> 853
<211> 525
<212> DNA
<213> Enterococcus faecium

<400> 853
gtccgaatcc tatgaaaatg tatcctatag aaggaaacaa atcagtacaa tttatcaaac 60

ctattttaga aaaattagaa aatgttgagg ttggagaata ctcatattat gattctaaga 120

atggagaaac ttttgataag caaattttat atcattatcc aatcttaaac gataagttaa 180

aaataggtaa attttgctca ataggaccag gtgtaactat tattatgaat ggagcaaatc 240

atagaatgga tggctcaaca tatccattta atttatttgg taatggatgg gagaaacata 300

tgccaaaatt agatcaacta cctattaagg gggatacaat aataggtaat gatgtatgga 360

taggaaaaga tgttgtaatt atgccaggag taaaaatcgg ggatggtgca atagtagctg 420

ctaattctgt tgttgtaaaa gatatagcgc catacatgtt agctggagga aatcctgcta 480

acgaaataaa acaaagattt gatcaagata caataaatca gctgc 525

<210> 854
<211> 467
<212> DNA
<213> Staphylococcus aureus

<400> 854
cattagcagg aggatgtttc tggtgcatgg ttaaaccatt tacatcatat ccaggcatca 60

agtcagtcgt atctggttat agtggcggtc atgttgacaa cccaacttat gaacaggtat 120

gtacgaatca aaccggccat gtcgaagcag tacaaattac gtttgatcca gaggttactt 180

cctttgaaaa tatattagac atatatttca aaacatttga cccaactgat gatcaagggc 240

aatttttcga tagaggcgaa agctatcaac cagtcatttt ctatcatgat gaacatcaga 300

aaaaggctgc tgagtttaaa aagcaacaat taaatgaaca aggtattttc aagaaaccag 360

tgattacacc tattaaacca tataaaaatt tctatccagc tgaagactac catcaagatt 420

attacaaaaa gaacccggta cattattacc aatatcaacg tggttca 467

<210> 855
<211> 451
<212> DNA
<213> Staphylococcus aureus

<400> 855
gcatataaat atcaaaacca tacaagaaat aaaaaatgac tttcaaagaa gaatgaataa 60

agttaaagaa acttatggtg tatcagatga attatggaac agatggaaac aatggttaga 120

aaacgacgaa ctatggcctc gacatgcgac catgatacat ggggacttac atccaggaca 180

tataatggta gataaccaag caaacgtcac aggtctcata gactggactg aagcaaccca 240

ctccgaccca tcaatggact ttatgggaca ccatcgtgta ttcgacgacg aaggattaga 300

gcaactcata acagcatatg gtaaagctgg aggtgaaata tggccacgaa tgaaagagca 360

tataatagaa ctcaatgcag tattcccaat gtttatcgct gagtttgcta tggaatcagg 420

agaatcggcg tatgaaacga tggcattgaa a 451

<210> 856
<211> 505
<212> DNA
<213> Streptococcus pyogenes

<400> 856
ggtcttgtct atggcttcac tattaggttt tttaccctat gcggtctttg gacctgcaat 60

tggtgtgcta gtggatcgtc atgataggaa gaagataatg attggtgctg atttaattat 120

cgcagcagct ggttcggtgc ttactattgt tgcattctat atggagctac ctgtctggat 180

ggttatgata gtattgttta tccgtagcat tggaacagct tttcacaccc cggctctcaa 240

tgcggttacg ccacttttag taccagaaga acagcttacg aaatgtgcag gctatagtca 300

gtctttgcag tctataagct atattgttag tccggcggtt gcagcactct tatactccgt 360

ttgggaacta aatgctatta ttgccatcga tgtattgggt gctgtgattg catctattac 420

ggtagcaatt gtacgtattc ctaagctggg tgatcgcgtg caaagtttgg acccaaattt 480

cataagagaa atgcaagaag gaatg 505

<210> 857
<211> 540
<212> DNA
<213> Escherichia coli

<400> 857

gttgagaatg ggagagactg agccggtcag cagtcccacg agcgcgccca acaacatcag 60

caccggcacg cctggcaact gtgaaagcag aagcgagccc accgcagagc cacaaaatgc 120

caccgccagc cagttctgcg ctgatatccg ggcgccgacc gacgcatgaa tggcaatgcc 180

aaggagacca ccagccccca tcattgagga gaacagcccg agctctgcta cttggcgtcc 240

tgcatctaca aacagcgcag gcatgatgac gctgccgttg gcgccaacga tgcccacgaa 300

gatcatcact ataccaaaga gagggcgcag caggggttcg ctccagagaa aagcgacgcc 360

ggcgcgcatg gagagagtcg ccgtcgtggt catcgtccga gcggcacgcg cgggaagcac 420

ccacgcgccg agcagacctg caaggacgga gcagaacgcc gtcagcccga gcgttggcgc 480

agcgccaagc aggccgattg cggccccccc aagggccggg ccacctagaa tcgcgacgtt 540

<210> 858
<211> 500
<212> DNA
<213> Streptococcus pneumoniae

<400> 858
actaagaaaa tcgtagctat ttgggcccag gatgaagagg gtgtgattgg gaaagacaat 60

cgtctacctt ggcatttacc agcagaactg caacacttca aagaaacaac tctgaatcat 120

gctatcttga tggggcgggt aacctttgat ggaatagggc gtcgcttgct tccacaacgg 180

gagactttga ttttgacacg taacctagaa gaaacgatag atggggttgc tacttttcat 240

gatgtccagt ctgtcttgga ctggtatcag gctcaagaaa agaatctcta tattcttggt 300

ggaaagcaga tttttcaggc ttttgaaccc tatcttgacg aagtgattgt gactcacatt 360

catgctcggg tggagggaga tacctatttc cctgaagagt ttgatttgtc tctttttgag 420

acagtttcaa gtaaatttta cgccaaagat gagaagaatc cttatgattt taccatccaa 480

tatcgcaaga gaaaggaagt 500

<210> 859
<211> 423
<212> DNA
<213> Staphylococcus aureus

<400> 859
caattacctt ggcacttacc aaatgattta aagcatatta aacaactgac cactgggaat 60

acacttgtaa tggcacggaa aacttttaat tctataggga agccattgcc aaatagacgt 120

aacgtcgtac tcactaacca agcttcattt caccatgaag ggtagatgt tataaactct 180

cttgatgaaa ttaaagagtt atctggtcat gtttttatat ttggaggaca aacgttatac 240

gaagcaatga ttgaccaggt agatgatatg tatatcacag taatagatgg aaagtttcaa 300

ggagacacat tctttccacc atacacattc gaaaactggg aagtcgaatc ttcagtagaa 360

ggtcaactag atgaaaaaaa tactataccg catacattct tacatttagt gcgtagaaaa 420

ggg 423

<210> 860
<211> 506
<212> DNA
<213> Escherichia coli

<400> 860
tggaatgggt agcttcttcg tctttttctc cattgcgccc ggactaatga tgggcaggca 60

aggtgtgtct cagcttggct tcagcctgct gttcgccaca gtggcaattg ccatggtgtt 120

tacggctcgt tttatggggc gtgtgatacc caagtggggc agcccaagtg tcttgcgaat 180

gggaatggga tgcctgatag ctggagcagt attgcttgcc atcaccgaaa tatgggcttc 240

gcagtccgtg ttaggcttta ttgctccaat gtggctagtg ggtattggtg tcgccacagc 300

ggtatctgtg tcgcccaatg gcgctcttcg aggattcgac catgttgctg gaacggtcac 360

ggcagtctac ttctgcttgg gcggtgtact gctaggaagc atcggaacgt tgatcatttc 420

gctgttgccg cgcaacacgg cttggccggt tgtcgtgtac tgtttgaccc ttgcaacagt 480

cgtgctcggt ctgtcttgtg tttccc 506

<210> 861
<211> 530
<212> DNA
<213> Enterococcus faecium

<400> 861
gataaccatc acaaacagaa tgatgtacct gtaaagatag cggtaaatat attgaattac 60

ctttattaat gaattttcct gctgtaataa tgggtagaag gtaattacta ttattattga 120

tatttaagtt aaacccagta aatgaagtcc atggaataat agaaagagaa aaagcatttt 180

caggtatagg tgttttggga aacaatttcc ccgaaccatt atatttctct acatcagaaa 240

ggtataaatc ataaaactct ttgaagtcat tctttacagg agtccaaata ccagagaatg 300

ttttagatac accatcaaaa attgtataaa gtggctctaa cttatcccaa taacctaact 360

ctccgtcgct attgtaacca gttctaaaag ctgtatttga gtttatcacc cttgtcacta 420

agaaaataaa tgcagggtaa aatttatatc cttcttgttt tatgtttcgg tataaaacac 480

taatatcaat ttctgtggtt atactaaaag tcgtttgttg gttcaaataa 530

<210> 862
<211> 535
<212> DNA
<213> Staphylococcus aureus

<400> 862
agaaaattgg gatagaaaag aatattttga acactatttt aaccagcaaa ctacgtatag 60

cattactaaa gaaattgata ttactttgtt taaagatatg agtaaaaaga aaggatatga 120

aatttatcct tctttgattt atgcaattat ggaagttgta aataaaaata aagtgtttag 180

aacaggaatt aatagtgaga ataaattagg ttattgggat aagttaaatc ctttgtatac 240

agtttttaat aagcaaactg aaaaatttac taacatttgg actgaatctg ataacaactt 300

cacttctttt tataataatt ataaaaatga cttgcttgaa tataaagata aagaagaaat 360

gtttcctaaa aaaccgatac ctgaaaacac cctaccgatt tcaatgattc cttggattga 420

ttttagttca tttaatttaa acattggtaa caatagcaac tttttattgc ctattattac 480

gataggtaaa ttttatagtg agaataataa aatttatata ccagttgcct tgcag 535

<210> 863
<211> 632
<212> DNA
<213> Proteus mirabilis

<400> 863
ttagcactct atgcgacgat gcaggtgatc ttcgcaccta ttttaggaaa attatcagat 60

aaatatggca gaaaacctat tttattaatt tcgctattgg gtgccgcatt agattaccta 120

ttaatggctt gccccacctc attatggatg ctctacattg gacgaataat tgcgggtata 180

acaggagcca ctggtgcagt atgcgcatca gcaatgactg atgtaactca tcctcatgaa 240

agaacacgct atttcggttt tttgggtggt gcatttggtg tgggtttaat tattggcccc 300

atgttagggg gattactcgg tgagatcagc gcccatacgc catttatctt tgcggctatt 360

tctcattcgt tattatttat attttcatta ctttgtttcc aagaaactca aaccacaaaa 420

atttcgactg aaatatccgc attaaatcag gatacagcgc ctcactctac cactggtttt 480

attaaaaaga gtctcttttt ttggcttatt gcctatttta ttattcaact aatagggcaa 540

attccggcca ctatttgggt gctattcaca caagttcgtt tcgcttggca cactactgaa 600

gtaggtttat ctcttgcatt tcttggtgta tt 632

<210> 864
<211> 656
<212> DNA
<213> Enterococcus faecalis

<400> 864
cacctgcgag tacaaactgg gtgaacacag cctttatgtt aaccttttcc attggaacag 60

ctgtatatgg aaagctatct gatcaattag gcatcaaaag gttactccta tttggaatta 120

taataaattg tttcgggtcg gtaattgggt ttgttggcca ttctttcttt tccttactta 180

ttatggctcg ttttattcaa ggggctggtg cagctgcatt tccagcactc gtaatggttg 240

tagttgcgcg ctatattcca aaggaaaata ggggtaaagc atttggtctt attggatcga 300

tagtagccat gggagaagga gtcggtccag cgattggtgg aatgatagcc cattatattc 360

attggtccta tcttctactc attcctatga taacaattat cactgttccg tttcttatga 420

aattattaaa gaaagaagta aggataaaag gtcattttga tatcaaagga attatactaa 480

tgtctgtagg cattgtattt tttatgttgt ttacaacatc atatagcatt tcttttctta 540

tcgttagcgt gctgtcattc ctgatatttg taaaacatat caggaaagta acagatcctt 600

ttgttgatcc cggattaggg aaaaatatac cttttatgat tggagttctt tgtggg 656

<210> 865
<211> 554
<212> DNA
<213> Enterococcus faecalis

<400> 865
gacaaaggta caacgaggac ggataatacg cttttagaac gtcagagagg aattacaatt 60

cagacaggaa taacctcttt tcagtgggaa aatacgaagg tgaacatcat agacacgcca 120

ggacatatgg atttcttagc agaagtatat cgttcattat cagttttaga tggggcaatt 180

ctactgattt ctgcaaaaga tggcgtacaa gcacgaactc gtatattatt tcatgcactt 240

aggaaaatgg ggattcccac aatctttttt atcaataaga ttgaccaaaa tggaattgat 300

ttatcaacgg tttatcagga tattaaagag aaactttctg ccgaaattgt aatcaaacag 360

aaggtagaac tgtatcctaa tgtgtgtgtg acgaacttta ccgaatctga acaatgggat 420

acggtaatag agggaaacga tgacctttta gagaaatata tgtccggtaa atcattagaa 480

gcattggaac tcgaacaaga ggaaagcata agatttcaga attgttctct gttccctctt 540

tatcatggaa gtgc 554

<210> 866
<211> 404
<212> DNA
<213> Enterococcus faecium

<400> 866
tcttatggca gtacgcaacg taaaatcgat tgtgcgctct gtggaaaaac atgatttcag 60

gttggacagc gaccgtggca aggtactcag cgacatgaca gttggtgtgg tgggaacggg 120

ccagataggc aaagcggtta ttgagcggct gcgaggattt ggatgtaaag tgttggctta 180

tagtcgcagc cgaagtatag aggtaaacta tgtaccgttt gatgagttgc tgcaaaatag 240

cgatatcgtt acgcttcatg tgccgctcaa tacggatacg cactatatta tcagccacga 300

acaaatacag agaatgaagc aaggagcatt tcttatcaat actgggcgcg gtccacttgt 360

agatacctat gagttggtta aagcattaga aaacgggaaa ctgg 404

<210> 867
<211> 250
<212> DNA
<213> Enterococcus faecium

<400> 867
gtgcggtatt gggaaacagt gccgcgttag ttgttggcga ggtggaccaa atcaggctgc 60

agtacggaat ctttcgtatt catcaggaag tcgagccgga aaaaggctct gaaaacgcag 120

ttataaccgt tcccgcagac ctttcagcag aggagcgagg acggatacag gaaacggcaa 180

aaaaaatata taaagcgctc ggctgtagag gtctagcccg tgtggatatg tttttacaag 240

ataacggccg 250

<210> 868
<211> 663
<212> DNA
<213> Enterococcus faecium

<400> 868
aagtgtgggc attactgttt ttggatgcga acaggatgag gcaaatgctt tccgcgcttt 60

atcgccggat tttcatatta tccctacgct gattagcgat gcgatatcgg cagacaacgc 120

aaaattggcc gctggcaatc aatgcgttag cgtaggccat aagtccgagg tttccgaggc 180

gacaattctt gcgctgagaa aggtcggggt aaaatacatt tctacccgca gcatcggctg 240

cgatcacatt gatacgactg ccgccgagag aatgggaatc tcggttggca cggttgcgta 300

ttcgccggac agcgttgcgg attatgcttt gatgctgatg ctgatggcca tacggggtgc 360

aaaacccacc atgcacgccg tggcgcaaca agatttcaga ttggatcgta tccgggggaa 420

agaactgggg gatatgactg tgggagttat tggaaccggc catatcgggc aagcggtcgt 480

caaaaggctg cggggatttg gatgccatgt gctggcctat gataacagcc gaaaaatgga 540

tgcagattat gtccagcttg atgagcttct aaaaaacagc gatattgtta cgctccatgt 600

gccgctttgt gcggataccc gccatctgat cggtcagaag caaattggag agatgaagca 660

agg 663

<210> 869
<211> 572
<212> DNA
<213> Enterococcus faecium

<400> 869
acgagaatta tacggttttc aaatactata ccgccaaaga agcattggaa tgtatagaca 60

agtctgagat tgaccttgcc atattggaca tcatgcttcc cggcacaagc ggccttacta 120

tctgtcaaaa aataagggac aagcacacct atccgattat catgctgacc gggaaagata 180

cagaggtaga taaaattaca gggttaacaa tcggcgcgga tgattatata acgaagccct 240

ttcgcccact ggagttaatt gctcgggtaa aggcccagtt gcgccgatac aaaaaattca 300

gtggagtaaa ggagcagaac gaaaatgtta tcgtccactc cggccttgtc attaatgtta 360

acacccatga gtgttatctg aacgagaagc agttatccct tactcccacc gagttttcaa 420

tactgcgaat cctctgtgaa aacaagggga atgtggttag ctccgagctg ctatttcatg 480

agatatgggg cgacgaatat ttcagcaaga gcaacaacac catcaccgtg catatccggc 540

atttgcgcga aaaaatgaac gacaccattg at 572

<210> 870
<211> 280
<212> DNA
<213> Enterococcus faecium

<400> 870
gaattctact tgtcgaggat gatgatcata tctgtaatac agtaagggcg tttctggctg 60

aggcaggata tcaggtggat gcctgcacag atggaaatga ggcatacacc aagttttacg 120

aaaacactta tcaactggtt attcttgata ttatgctgcc cggtatgaac gggcatgaac 180

ttttgcgtga atttcgtgcg aaaaatgata ctcccattct gatgatgaca gccctgtcgg 240

atgacgaaaa ccaaatccgg gcgtttgatg cagaggcaga 280

<210> 871
<211> 564
<212> DNA
<213> Enterococcus faecium

<400> 871
aatgatccga gggaaacttg gggattggat cttaagtatt ttggaaaaca aatatgactt 60

aaatcacctg gacgcgatga aattatatca atattccata cggaacaata tagatatctt 120

tatttatgtg gcgattgtca ttagtattct tattctatgt cgcgtcatgc tttcaaaatt 180

cgcaaaatac tttgacgaga taaataccgg cattgatgta cttattcaga acgaagataa 240

acaaattgag ctttctgcgg aaatggatgt tatggaacaa aagctcaaca cattaaaacg 300

gactctggaa aagcgagagc aggatgcaaa gctggccgaa caaagaaaaa atgacgttgt 360

tatgtacttg gcgcacgata ttaaaacgcc ccttacatcc attatcggtt atttgagcct 420

gcttgacgag gctccagaca tgccggtaga tcaaaaggca aagtatgtgc atatcacgtt 480

ggacaaagcg tatcgactcg aacagctaat cgacgagttt tttgagatta cacggtataa 540

cctacaaacg ataacgctaa caaa 564

<210> 872
<211> 595
<212> DNA
<213> Enterococcus faecium

<400> 872
acatgagttg gaggaaacac agcgatattt ctttgcggca gcttctcatg agctaaaaac 60

gcccatcgcg gctacaagcg ttctgttgga gggaatgctt gaaaatatcg gtgactacaa 120

agatcattct aagtatctgc gcgaatgcat caaaatgatg gataggcagg gcaaaatcat 180

ttccgaaata ctggagcttg tcagcctgaa tgatgggaga atcgtaccca tagctgaacc 240

gttggacata gggcgcacgg ttgccgagtt gctgcccgat tttcaaacct tggcagaggc 300

aaacaaccag cggttcgtca cagatattcc agccgggcaa attgtcctgt ccgatccgag 360

gctgctccaa aaggcactat ccaatgtcat attgaatgca gttcagaaca cgccgcaggg 420

aggcgaggta cggatatgga gtgagcctgg tgctgaaaaa tgccgccttt ttgttttgaa 480

catgggcgtt cacattgatg atactgcgct tccaaggctg ttcaccccat tctatcgcat 540

tgatcaggcg cgaagcagaa aaagtgggcg aagcggttta ggacttgcca tcgta 595

<210> 873
<211> 598
<212> DNA
<213> Enterococcus faecium

<400> 873
ggcagcaaag accttaaacg gcttattgat aagaccgggg gaaacctttt ctttctggtg 60

gctggtacgc catgcggaca aagatacccc ctataaagac ggccttacgg tgaccaatgg 120

taaactcacc accatgtcgg gcggcggtat gtgccagatg agcaatttac tattttggat 180

gttcctgcat acgccattga caattatcca gcgcagaggt cacgaagtaa aggagtttcc 240

agagccaaac agtgacgaga ttaaaggggt ggatgcaacc atttcagagg gctggattga 300

tttaaaagtg cgaaacgata ccgactgcac ctaccaaata tgggtgacct tagatgatga 360

gaaaatcatc ggtcaggtgt ccgccgacaa agagccccaa gcattataca aaattacaaa 420

tggcagtatc cagtatgtcc gtgaaagtgg cgggatttat gaatatgccc aggttaaacg 480

gatgcaagtt gccttaggta ccggggaaat aatagattgc aagctgcttt atacaaacaa 540

atgcaaaatc tgttatcccc tcccggaaag tgtggatatt caggaggaga accaatga 598

<210> 874
<211> 673
<212> DNA
<213> Enterococcus faecalis

<400> 874
gaagatggaa caattcaagg attcatggaa accattaata tgccttatgt aggcgcgggt 60

gtcttagcta gcgttaacgc aatggacaaa atcatgacga aatatctttt acaaactgtt 120

ggcattccac aagtaccatt cgtgccagtt ttaagaagtg actggaaagg aaatccaaaa 180

gaagtctttg aaaaatgtga aggttcttta atttatccgg tctttgttaa acctgccaat 240

atgggttcta gtgtcggaat tagcaaagtg gaaaatcgtg aagaattgca agaagcattg 300

gaagaagctt tccgttatga tgcccgagca attgttgaac aagggatcga agcacgtgaa 360

attgaagtag ccattttagg aaatgaagat gtccgtacga ctttacctgg tgaagtggtg 420

aaagatgtcg ctttctatga ttatgatgca aaatacatca ataacacgat tgaaatgcaa 480

atcccagcgc atgttccaga agaagtagct catcaagcgc aagaatacgc taaaaaagcg 540

tatattatgt tagatggaag tggcttaagt cgctgtgatt tcttcttaac aagcaaaaac 600

gaattattcc tgaatgaatt gaacaccatg cctggtttta ctgactttag tatgtatcct 660

ttactgtggg aaa 673

<210> 875
<211> 360
<212> DNA
<213> Staphylococcus aureus

<400> 875
tacagtctat ccgggcattg ccagtcgggg atattaaaaa gagtataggt ttttattgcg 60

ataaactagg tttcactttg gttcaccatg aagatggatt cgcagttcta atgtgtaatg 120

aggttcggat tcatctatgg gaggcaagtg atgaaggctg gcgctctcgt agtaatgatt 180

caccggtttg tacaggtgcg gagtcgttta ttgctggtac tgctagttgc cgcattgaag 240

tagagggaat tgatgaatta tatcaacata ttaagccttt gggcattttg caccccaata 300

catcattaaa agatcagtgg tgggatgaac gagactttgc agtaattgat cccgacaaca 360

<210> 876
<211> 508
<212> DNA
<213> Enterococcus faecium

<400> 876
tgggataact tcacaggaaa accggtggat gggtatgagg tgaatcgcat catcggcaca 60

aaggccgtgg cgtttgctct gcgcgaggca caaatccatg cggctgcgct tggctatggc 120

ttgcttttat gggatggata tcggccaaga actgcggtgg actgcttcct gcgttgggca 180

gcgcaaccgg aggacaatct cacaaaagaa aaattttacc ccaatataga gcgagccgag 240

ttgattacaa agggttatgt ggcctcacaa tccagccata gccgtggaag cgcaattgat 300

cttacgctct accacctgga tacaggggaa cttgtttcaa tgggaagtaa cttcgatttt 360

atggacgaac ggtcgcatca tacagcaaaa gggatagggg atgcagaggc acaaaatcga 420

agatgcttgc gtaaaatcat ggaaagcagc ggatttcagt cttatcgctt tgaatggtgg 480

cactataagt tgattgatga gccatacc 508

<210> 877
<211> 551
<212> DNA
<213> Enterococcus faecium

<400> 877
atacttaggt tatgactacg ttaatgaagc actgttttct caggaaaaag tcgaatttca 60

aaattatgat caaaatccca aagaacattt agaaaatagt gggacttctg aaaataccca 120

agagaaaaca attacagaag aacaggttta tcaaggaaat ctgctattaa tcaatagtaa 180

atatcctgtt cgccaagaaa gtgtgaagtc agatatcgtg aatttatcta aacatgacga 240

attaataaat ggatacgggt tgcttgatag taatatttat atgtcaaaag aaatagcaca 300

aaaattttca gagatggtca atgatgctgt aaagggtggc gttagtcatt ttattattaa 360

tagtggctat cgagactttg atgagcaaag tgtgctttac caagaaatgg gggctgagta 420

tgccttacca gcaggttata gtgagcataa ttcaggttta tcactagatg taggatcaag 480

cttgacgaaa atggaacgag cccctgaagg aaagtggata gaagaaaatg cttggaaata 540

cgggttcatt t 551

<210> 878
<211> 552
<212> DNA
<213> Enterococcus faecium

<400> 878
gtgcgttcat tatttcgttc acagtctgca cgctgttttt ggggtggaga ctggcttccg 60

tattggaggc aacacagata ccgcccatcc ctgcaactca tacaggcagc agcactgacg 120

tagtggagaa tttggaggaa aacgctcttg ccaccgccaa agaacaggga gatgaacagg 180

aatggagcct gattttagtg aacaggcaga accccatccc cgcacagtac gatgtggagc 240

ttgagcaact atcaaatggt gagcggatag atattcggat ttctccctat cttcaagatt 300

tgtttgatgc cgcaagaact gatggagttt acccgattgt cgcatccgga taccgaacaa 360

cagaaaaaca gcaagaaatt atggatgaaa aaattgccga atataaggcg aaaggctaca 420

cctctgcaca ggctaaagcg gaagcagaaa cttgggtggc cgtgccggga acgagcgagc 480

atcagcttgg tcttgctgtg gatatcaatg cggacggaat tcattcaaca ggcaacgagg 540

tttatagatg gc 552

<210> 879
<211> 542
<212> DNA
<213> Enterococcus faecalis

<400> 879
ttgtctggta tcccctatgt aggctgcgat attcaaagct ccgcagcttg catggacaaa 60

tcactggcct acattcttac aaaaaatgcg ggcatcgccg tccccgaatt tcaaatgatt 120

gaaaaaggtg acaaaccgga ggcgaggacg cttacctacc ctgtctttgt gaagccggca 180

cggtcaggtt cgtcctttgg cgtaaccaaa gtaaacagta cggaagaact aaacgctgcg 240

atagaagcag caggacaata tgatggaaaa atcttaattg agcaagcgat ttcgggctgt 300

gaggtcggct gcgcggtcat gggaaacgag gatgatttga ttgtcggcga agtggatcaa 360

atccggttga gccacggtat cttccgcatc catcaggaaa acgagccgga aaaaggctca 420

gagaatgcga tgattatcgt tccagcagac attccggtcg aggaacgaaa tcgggtgcaa 480

gaaacggcaa agaaagtata tcgggtgctt ggatgcagag ggcttgctcg tgttgatctt 540

tt 542

<210> 880
<211> 457
<212> DNA
<213> Enterococcus faecium

<400> 880
aggattgcta gctttatatt tagtgacact aatctggtta gtgttattca aattacaata 60

caatatttta tcagtattta attatcatca aagaagtctt aacttgactc catttactgc 120

tactgggaat ttcagagaga tgatagataa tgttataatc tttattccat ttggcttgct 180

tttgaatgtc aattttaaag aaatcggatt tttacctaag tttgcttttg tactggtttt 240

aagtcttact tttgaaataa ttcaatttat cttcgctatt ggagcgacag acataacaga 300

tgtaattaca aatactgttg gaggctttct tggactgaaa ttatatggtt taagcaataa 360

gcatatgaat caaaaaaaat tagacagagt tattattttt gtaggtatac ttttgctcgt 420

attattgctc gtttaccgta cccatttaag aataaat 457

<210> 881
<211> 360
<212> DNA
<213> Enterococcus flavescens

<400> 881
aagctgcctt atgtaggttg cggggtggcc ggttctgcct tatgtatgaa caaatggctg 60

ctgcatcaag ctgcagcagc cattggcgta caaagtgctc ctacgattct cttgacaaat 120

caagccaacc agcaagaaca aatcgaagct tttatccaga cccatggctt tccagttttc 180

tttaagccta atgaagcggg ctcctcaaaa gggatcacta aagtcacctg cgttgaagaa 240

atcgcttctg ccttaaaaga agcctttact tattgttccg cagtgctcct acaaaaaaat 300

attgccggtg ttgagatcgg ttgcggtatt ttgggcaacg actctttgac tgtcggtgct 360

<210> 882
<211> 459
<212> DNA
<213> Enterococcus faecium

<400> 882
gacatacgag ttggctgaat cgcttttgaa ggcaaaagaa ctggctgcta cccaagggta 60

cggattgctt ctatgggacg gttaccgtcc taagcgtgct gtaaactgtt ttatgcaatg 120

ggctgcacag ccggaaaata acctgacaaa ggaaagttat tatcccaata ttgaccgaac 180

tgagatgatt tcaaaaggat acgtggcttc aaaatcaagc catagccgcg gcagtgccat 240

tgatcttacg ctttatcgat tagacacggg tgagcttgta ccaatgggga gccgatttga 300

ttttatggat gaacgctctc atcatgcggc aaatggaata tcatgcaatg aagcgcaaaa 360

tcgcagacgt ttgcgctcca tcatggaaaa cagtgggttt gaagcatata gcctcgaatg 420

gtggcactat gtattaagag acgaaccata ccccaatag 459

<210> 883
<211> 500
<212> DNA
<213> Proteus mirabilis

<400> 883
cctttgaagc tggtactgac cctgatattg cgcaagtcca agtgcaaaat aaattgcaat 60

tggcaatgcc tcttttacct caggaagtac aacaacaagg gattagtgtc gataaatctt 120

ctagttcatt cttaatggtt gcaggtttta tctctggtga tggctcgatg tcacaagatg 180

acatcgccga ctatgtaggt gcaacaatta aagatccatt aagccgtgtc acaggggtgg 240

gtgaaacgca gttatttggt acacaatacg caatgcgtat ttggttagat ccagataaac 300

tggtgaaata taacatgacc acacttgatg ttattaatgc gattaaatcg caaaataacc 360

aagtggcggc aggccaatta ggtggtacgc caccagtgcc tggtcagcgt ttaaatgtat 420

ctatcattgc gcaaactcga cttaatacac ctgagcaatt tgctgatatt ctgatgaaag 480

tcaatcaaga cggttcacag 500

<210> 884
<211> 280
<212> DNA
<213> Pseudomonas aeruginosa

<400> 884
tgtcgaagtt tttcattgat aggcccattt tcgcgtgggt gatcgccttg gtgatcatgc 60

tcgcgggcgg cctgtcgatc ctcaatctgc cggtcaacca gtacccggcc atcgccccgc 120

cggccatcgc cgtgcaggtg agctacccgg gcgcctcggc cgagacggtg caggacaccg 180

tggtccaggt gatcgagcag cagatgaacg ggatcgacaa tctgcgctac atctcctcgg 240

agagtaactc cgacggcagc atgaccatca ccgtgacctt 280

<210> 885
<211> 477
<212> DNA
<213> Staphylococcus aureus

<400> 885
caatggttac aggttgtgga agaactttct ccttttaaag ctggcttata cctattacct 60

atggcaatag gagctatggt gtttgcacca attgcacccg gattagcggc gcgatttgga 120

ccgaaaatag tgttaccttc cggaattgga attgcagcca ttggcatgtt tattatgtat 180

ttctttggtc atccattatc atattctaca atggctttag cattaatttt agttgaagct 240

ggtacggctt cactagcagt tgcatctgct ctaataatgt tagaaacacc tacatcaaaa 300

gcaggtaatg cagctgctgt tgaagagtct atgtatgacc ttggaaatgt ttttggtgta 360

gcagtacttg gtagcctatc ttctatgctt tatcgtgtat ttttagatat ttcatctttt 420

tcatcaaaag gtatagttgg agatttagct catgtagctg aagaatctgt agtgggc 477

<210> 886
<211> 584
<212> DNA
<213> Escherichia coli

<400> 886
ctcttagacg ccctgtccga tcagatgcac cgtgtttcaa tcgacagctt ccaaccggaa 60

acccagcgct atgcgctcaa gcgcggcgtg ggctacctga acgatatcca aggatttcct 120

gaccctgcgc tctatcccga tattgctgag gcggactgca ggctggtggt tatgcactca 180

gcgcagcggg atggcatcgc cacccgcacc ggtcaccttc gacccgaaga cgcgctcgac 240

gagattgtgc ggttcttcga ggcgcgggtt tccgccttgc gacggagcgg ggtcgctgcc 300

gaccggctca tcctcgatcc ggggatggga tttttcttga gccccgcacc ggaaacatcg 360

ctgcacgtgc tgtcgaacct tcaaaagctg aagtcggcgt tggggcttcc gctattggtc 420

tcggtgtcgc ggaaatcctt cttgggcgcc accgttggcc ttcctgtaaa ggatctgggt 480

ccagcgagcc ttgcggcgga acttcacgcg atcggcaatg gcgctgacta cgtccgcacc 540

cacgcgcctg gagatctgcg aagcgcaatc accttctcgg aaac 584

<210> 887
<211> 784
<212> DNA
<213> Escherichia coli

<400> 887
catcgtcaac ataacctcgg acagtttctc cgatggaggc cggtatctgg cgccagacgc 60

agccattgcg caggcgcgta agctgatggc cgagggggca gatgtgatcg acctcggtcc 120

ggcatccagc aatcccgacg ccgcgcctgt ttcgtccgac acagaaatcg cgcgtatcgc 180

gccggtgctg gacgcgctca aggcagatgg cattcccgtc tcgctcgaca gttatcaccc 240

cgcgacgcaa gcctatgcct tgtcgcgtgg tgtggcctat ctcaatgata ttcgcggttt 300

tccagacgct gcgttctatc cgcaattggc gaaatcatct gccaaactcg tcgttatgca 360

ttcggtgcaa gacgggcagg cagatcggcg cgaggcaccc gctggcgaca tcatggatca 420

cattgcggcg ttctttgacg cgcgcatcgc ggcgctgacg ggtgccggta tcaaacgcaa 480

ccgccttgtc cttgatcccg gcatggggtt ttttctgggg gctgctcccg aaacctcgct 540

ctcggtgctg gcgcggttcg atgaattgcg gctgcgcttc gatttgccgg tgcttctgtc 600

tgtttcgcgc aaatcctttc tgcgcgcgct cacaggccgt ggtccggggg atgtcggggc 660

cgcgacactc gctgcagagc ttgccgccgc cgcaggtgga gctgacttca tccgcacaca 720

cgagccgcgc cccttgcgcg acgggctggc ggtattggcg gcgctgaaag aaaccgcaag 780

aatt 784

<210> 888
<211> 344
<212> DNA
<213> Staphylococcus lugdunensis

<400> 888
gaggtgtaat tatgattcag actattgtaa ctgctgctat ctttatattg cgcaagcatt 60

agacttatta gtgattttat taatgttctt tgctagagca aagactagga aagaatatcg 120

agatatttat attggtcaat atgtaggatc tgtggcatta attgtcataa gtttattctt 180

tgcctttgtc ttaaattatg ttcctgaaaa atggatatta ggattattag ggttaatacc 240

gatttattta ggaattaaag tggctattta tggtgatagt gacggagaag agagagctaa 300

aaaagaattg aatgaaaagg gattgtctaa attagttggt acga 344

<210> 889
<211> 503
<212> DNA
<213> Pseudomonas aeruginosa

<400> 889
ctcgacccga tctacgtcga cgtcacccag ccgtccaccg ccctgttgcg catgcgccgc 60

gaactggcca gcggccagtt ggagcgcgcc ggcgacaacg ctgcgaaggt ctccctgaag 120

ctggaggacg gtagccaata cccgctggaa ggccgcctcg aattctccga ggtttccgtc 180

gacgaaggca ccggctcggt caccatccgc gccgtgttcc ccaacccgaa caacgagctg 240

ctgcccggca tgttcgttca cgcgcagttg caggaaggcg tcaagcagaa ggccatcctc 300

gctccgcagc aaggcgtgac ccgcgacctc aagggccagg ctaccgcgct ggtggtgaac 360

gcgcagaaca aggtcgagct gcgggtgatc aaggccgacc gggtgatcgg cgacaagtgg 420

ctggtcaccg aaggcctgaa cgccggcgac aagatcatta ccgaaggcct gcagttcgtg 480

cagccgggtg tcgaggtgaa gac 503

<210> 890
<211> 503
<212> DNA
<213> Proteus mirabilis

<400> 890
tgtcatcata gctcttaaca taatcgcggc tcttcttaaa tcaaggttgg caggaagttg 60

ttttttttcg atacagcgag ataaagattg ctctattcta gagtaatcgg ctgcacataa 120

ttctcggcgg atttcaacaa ttggtgtcat ttcaccaaca aattcgcact tatggaaata 180

tatttctaga agtgcattat gtttcggatc ttcgacaatt gatgtcaata tgtaaataag 240

caattctctt aatacaaata gtggatcatc tggatatttt gattgatact ctaattctaa 300

tgattctatt tttaagtcgg tgagttcaca cgcttcagta aataaatcca ctttattctt 360

aaagtgccaa tatattgcac ctcgagttac tccggcctcg gttgcaatat ctgaaagtga 420

tgtggcagaa acaccttgca cagtaaatag cctaagtgca gcatcaataa tctgctgtct 480

tgtctcttgt gcttggcgtt tag 503

<210> 891
<211> 343

<212> DNA
<213> Enterococcus faecalis

<400> 891
gaccaggagt tggtggtttt attgcttatt taggaattcg cgctccattt tttgcggccg 60

catttttagc gtttattggt tttattttga cattaactgt tttgaaggag ccagagaaac 120

gaattttagc cgctgttgaa gcgaaaaaag gttcatttat ggatatttta agaaatccaa 180

tgtttacctc attatttgtg attatcttaa tttcctcttt tggcctgcaa gcgttcgaat 240

ctatttatag tattatggcg accattaatt ttggctttac cacaagtgaa atagcaatcg 300

tgattacggt tagtggtatt ttagcgttga tttgtcagct gtt 343

<210> 892
<211> 544
<212> DNA
<213> Proteus mirabilis

<400> 892
ctggctctgt tagtgctttc aggcagcttg gttgttgctg gatgtggcga caaaaatcag 60

tctgctggag gtccacctcc tgctcctgct gtaggtgttg ttacattaga tgcgaaacca 120

ctgactatca caacagactt acctggtcgt acatctgctt atcgtatcgc agaggttcgc 180

cctcaggttg gcggcatcat cttaaaacgc aattacaccg aaggtagtta tgtagaagca 240

ggaacatctt tataccaaat cgatcctgct atttttcaag ctacattaaa cagtgctcaa 300

gctgatttag caaaagcgaa agcgaatgct gaaattgctc gtctgactgt agagcgctat 360

aaacctctac tcggcaccaa ttatgtcagt aaacaagatt ttgataccgc aacatctcag 420

tacgctcaag ctgttgctgc agtaaaagca gctgaagcta cagtgactaa tgcaaaaatt 480

aatcttgaat ataccaaagt caccgcacca atttctggcc gttcaggtaa atcaacggta 540

acag 544

<210> 893
<211> 573
<212> DNA
<213> Proteus vulgaris

<400> 893
cctgaaatcc actactgacc ggctccagcc gctgacctta gatacctgcc agcaagctaa 60

ccccgaactg accgcccgcg cagcgtttag catgaatgtc cgaacgtttg tgctggtgaa 120

agataaaaaa acattctgtt catctgcgac cggtgagatg gacattccac tcaatgaatt 180

gattccggcg ctcgacatta ataaaaacgt cgatatggcg atcttacccg gcacgccgat 240

ggtgccgaac aaacccgcaa tcgtcatctg gtatcgcaac cctttgctga aaaatagcgg 300

cgtctttgcc gctctgaatc tcaacctgac gccttcactc ttttatagtt cacggcagga 360

agattacgat ggcgtcgccc tcattattgg caatactgcg ctatctacct tttcttcacg 420

tttgatgaac gttaacgaat taaccgacat gccagtccgt gaaactaaaa ttgcgggcat 480

tcctctgacc gttcggcttt atgcagatga ctggacatgg aacgatgtgt ggtacgcatt 540

tttactgggc ggcatgagtg gaactgtcgt tgg 573

<210> 894
<211> 581
<212> DNA
<213> Streptococcus mutans

<400> 894
gaaatgatat tgacgggact ttcataaaaa ttttcaagga cttgaggtgt aataatatct 60

tttttaggac cttgagccac tattttacct ctacgaagga ggaggatatg actcatttta 120

tcagtgattt cttcagcatg gtgggtaaca taaaggatag ttggagcatg tggtaactca 180

gtaatctttt caacttgtgt tagcaatttt tcacgggcaa aaagatccag tccgctggtt 240

gcttcatcca aaataatgat ttcaggatct tccataaggc tgcgcgcaat aaggaggagt 300

tgtttttcac cttgtgagag gctgctatag atgcgaccaa gcaagtgttt tccgccgatg 360

acagtaagca tttggcgtgc ttcattaagt tctgtttcgt cgtattcctt gtagagaatg 420

cttgatttgt atttaccagt tagcacgatc ttttcagcca acatatttgc agggagtcgc 480

tcagcaataa aagagcccac gacaccgatt ttagtccgca tattgggaat atcaccctga 540

ccaaacctag tattgagaat ttcaacctgt ccttgtgttg a 581

<210> 895
<211> 281
<212> DNA
<213> Escherichia coli

<400> 895
aaggctggct ttttcttgtt atcgcaatag ttggcgaagt aatcgcaaca tccgcattaa 60

aatctagcga gggctttact aagcttgccc cttccgccgt tgtcataatc ggttatggca 120

tcgcatttta ttttctttct ctggttctga aatccatccc tgtcggtgtt gcttatgcag 180

tctggtcggg actcggcgtc gtcataatta cagccattgc ctggttgctt catgggcaaa 240

agcttgatgc gtggggcttt gtaggtatgg ggctcataat t 281

<210> 896
<211> 609
<212> DNA
<213> Staphylococcus aureus

<400> 896
attagaaatt gcgactggtg caatcactgc aggtacatta attgcaatga tattttatgt 60

tattcagtta tctatgcctt taatcaatct ttccacgtta gttacagatt ataaaaaggc 120

agtcggtgca agtagtagaa tatacgaaat catgcaagaa cctattgaac cgacagaagc 180

tcttgaagat tctgaaaatg tattaattga tgacggtgta ttgtcatttg aacatgtaga 240

ctttaaatat gatgtgaaga aaatattaga tgatgtgtcg ttccaaatcc cacaaggtca 300

agtgagtgct tttgtaggcc cttctgggtc tggtaaaagt acgatattta atctgataga 360

acgtatgtat gaaattgagt caggtgatat taaatatggc cttgaaagtg tctatgatat 420

cccgttatct aagtggcgac gcaaaattgg atatgttatg caatcaaatt cgatgatgag 480

tggtacaatt agagacaata ttttatacgg aattaatcgt catgtttcag atgaagaact 540

tattaattat gctaaattag cgaactgtca tgattttatc atgcaatttg atgaaggata 600

tgacacgct 609

<210> 897
<211> 274
<212> DNA
<213> Staphylococcus aureus

<400> 897
ttggatagtt caacaaaaac attaacagaa gataaacagg tttaccgtgt ggagggtttc 60

tcgtgtgcga attgtgctgg gaagtttgaa aaaaatgtaa aagaactatc aggggtgcat 120

gatgctaaag tcaatttcgg agcttccaaa attgatgtct ttggcagtgc aaccgttgaa 180

gatctggaaa aggctggtgc tttcgagaat cttaaagtgg caccagagaa ggctagaaga 240

agggtcgaac cagtggtaac agaagataaa aatg 274

<210> 898
<211> 532
<212> DNA
<213> Klebsiella oxytoca

<400> 898
tgagcagcgt aaccagacat ggctggagtt ggtgggggaa gcgcagcagc tcatgggcga 60

acgctgcccg gcagatgagc cgcgggcgat tgcgctggca acccgctgga tggagcagct 120

ggagcaggat accgccggca ggccggagtt tctgactcgc ctgaatgaga tgcacgccgc 180

cgaaccgcag atgcgtgaac aaactggggt gacgccggag atgattgatt tcattacccg 240

tgcttttgcc gaaagcaagc tggccatctg ggcgcgctat ctgaacgccg aagagctggc 300

ctttacccgg cagcactatt tcgatcgcct gatggagtgg ccggcgctgg tggccgacct 360

gcatcgggcc tgtcgtgaga agcgagaccc ggcctccccg gaaggtcagc agctggcgca 420

gcgctggctg gcgctgttcc agtcttacgc gggtaaagat gcgcagacgc agcagaagtt 480

tcgctatgcc atggagcagg agccgcattt gatgaaagga acgtggatga ct 532

<210> 899
<211> 500
<212> DNA
<213> Klebsiella pneumoniae

<400> 899
atgaaaaacc ctcatcaaaa actttcatca tcaccattag cagtggtgcg cagtattgcc 60

actcactgga gtattattct gcagatggct aaacgtgatg ttgttggaag atataaaggt 120

tctgtgatgg gcctgctttg gtcttttttg aacccttat ttatgttaac agtatatact 180

tttgtcttct ccgtggtatt caaagccaga tggtcaactg gtggggacga aagtaggaca 240

cagtttgcta taattttatt tgtcggaatg atagttcatg gtttttaag tgaagtggta 300

aataaagcgc cgttgattat tttgggaaat acaaactatg tgaagaaagt tatatttcca 360

ttggaaacgc tgcctgttat ctctttattt gcggcattat ttcatacttg tatcagcctt 420

tgtgtgttac tgatggcgtt tttcattttt aatggatatt tacattggac catagtgttt 480

ttacctttgg tctttttccc 500

<210> 900
<211> 370
<212> DNA
<213> Enterococcus faecium

<400> 900
agaacatatc cgcaaacaag gagaaggaat ccttctctct ccgaaagtaa gctttcaagt 60

atatcagcaa aagggttatc aaatgacatc tgaagaatcc atcattcgtt ttgtcatgag 120

acaaacagag ttttcagaat cgcttgtccg tagtttgctg aatcacttag ggttgctca 180

ggaaactctg acgaaaccgt tatgtacatt aagtggggga gaagcgaccc gtctgacgat 240

tgctttgctt tttactaagc caagtaatgt gttgctgtta gatgaaccga ctaattttat 300

tgatatggca acgatcgaag ctttagagaa gctaatgcaa atatatccgg gaacgatttt 360

gtttacatca 370

<210> 901
<211> 400
<212> DNA
<213> Escherichia coli

<400> 901
aaccgtttat acgttggtga gttggttggc cattctggga tactggttgc tcattgcagg 60

cgtaacttta cgcattctaa tgaaacgacg cgcagttccc tccgcgatgg cctggctgtt 120

gattatttac attctgccgt tagtcggaat tattgcctat cttgccgttg gcgagctcca 180

tttaggcaaa cgccgcgctg agcgcgccag agcgatgtgg ccttccaccg caaaatggct 240

taacgacctt aaagcctgta agcatatctt cgccgaagaa aatagcagtg tcgctgcgcc 300

attattcaag ctttgcgagc gtcgtcaggg gatcgctggg gtcaaaggga atcagctaca 360

actgatgacc gagtcagatg atgtgatgca ggcgttaatc 400

<210> 902
<211> 540
<212> DNA
<213> Klebsiella pneumoniae

<400> 902
atgttctcgc tgcagttctg gcctatgaga aagggatgat cctggccaac gataaaccag 60

agcctacaaa acttgcagag aaccgctctt ctgaaacttg cagtttggaa gacctcaaaa 120

gcattcagtt acatactgct aatgaagaaa ttggggaaaa acgttttggt actgcgcgtg 180

ctattattaa aaatcttacc atctacaaat cagatggtac gactttgaca gagaaaccac 240

tcatcaaatc aggtgaagaa gttacatttg atttcaccat attagctacc gaagagatta 300

aggatgttgc tcttggcctt tccatatcca aagctcaggg aggggatatt tggggagata 360

gtaatattgg cgcaggttca ccaattacac ttcgtccagg tagtcagcgt atcgtttata 420

aagcaacgct gcctataaat tcgggcgatt acctaataca ctgcggcctc gctatggttg 480

gcaacggtgc tcgagaggag cttgatcaac gtcgcccgat gatgaaaata aagttttggt 540

<210> 903
<211> 770

<212> DNA
<213> Klebsiella pneumoniae

<400> 903
ataaagcaat gaagcctaaa gttatcgctt ctattgtatt atttaatcat tcctatgatg 60

atattaaaga tacgttcctc tcattatgcc atgaagagag cgttgaaaaa ataatcttcg 120

ttgataatgg tggttgtcag tgggcggcat cattgaatga acctaaggtg agctacatca 180

agtctcctta caactgtggt tttggtgctg gacataatct tgcaataaaa gcaagtgcag 240

actttgacgg ttattttctt atatgtaatc cggatataag ctttgataag cagtcacttg 300

ataaattagt ttcgtttgcg tgggaaaatg agtatagttt tttgttttcc ccgcaaataa 360

tatatagaaa tggtgagaga caatatagtt gccgtgtact acctactccc ggtaatcttt 420

taagacgttt ctttccagtg actgcaataa agtacgatgt taaatatgaa ctgaaagatg 480

cagcctatga tgagatattt tccccaccaa cggtatgtgg ctgtttcatg ttattaagta 540

atgtattatt gcaaaaactt aacggttttg atgaacgata ctttatgtat ctggaagatg 600

tagatttatg tcgccgagca ttacagctaa ccaaaatata ctattatcct ggaacaacta 660

ttgtccatgc ctttaataaa ggttcgtata aaagcaaatt attactttgg taccatattc 720

gctccgcagt ttcctatttt aataaatggg gatggttcct tgatcgtaaa 770

<210> 904
<211> 614
<212> DNA
<213> Staphylococcus aureus

<400> 904
ggttacttgt tgctgctttt gcgttatctc aaatgattat atcgccgttt ggtggtacgc 60

tagctgacaa attagggaag aaattaatta tatgtatagg gttaatttta ttctcagtgt 120

cagaatttat gtttgcagtt ggccacaatt tttcggtatt gatgttatcg agagtgattg 180

gtggtatgag tgctggtatg gtaatgccgg gtgtgacagg tttgattgca gatgtttcac 240

caagccatca aaaagcaaaa aactttggct acatgtcagc gattatcaat tctggattca 300

ttttaggacc agggattggt ggatttatgg cagaagtttc acatcgtatg ccattttatt 360

ttgcaggtgc attaggcatt ttagctttca taatgtcagt tgtattgatt catgatccga 420

aaaagtctac gacaagcggc ttccaaaaac ttgagcccca attattaaca aaaattaatt 480

ggaaagtctt tattacgcca gcaattttaa cgctcgtctt agcgttcggt ttatcggcat 540

ttgaaacact gtattcttta tatacatcgt ataaagtaaa ttattcacct aaagatattt 600

cgattgcgat tacg 614

<210> 905
<211> 411
<212> DNA
<213> Pseudomonas aeruginosa

<400> 905
gaactacccc gtgaatcccg acctgatgcc cgcgctgatg gcggtcttcc agcatgtgcg 60

gacgcgcatc cagagcgagc tcgattgcca gcgactcgac ctgaccccgc ccgacgtcca 120

tgtattgaag cttatcgacg aacaacgcgg gctgaacctg caggacctgg gacgccagat 180

gtgccgcgac aaggcactga tcacccggaa gatccgcgag ctggagggaa gaaacctggt 240

ccgccgcgag cgcaacccca gcgaccagcg cagcttccag ctcttcctca ccgacgaggg 300

gctggccatc caccagcatg cggaggccat catgtcacgc gtgcatgacg agttgtttgc 360

cccgctcacc ccggtggaac aggccaccct ggtgcatctc ctcgaccagt g 411

<210> 906
<211> 401
<212> DNA
<213> Escherichia coli

<400> 906
gcaaggaccg ttctatcatg gaaccaaagc caatttggcg attggtgact tgctaaccac 60

agggttcatc tctcatttcg aggacggtcg tattcttaag cacatctact tttcagcctt 120

gatggagcca gcagtttggg gagctgaact tgctatgtca ctgtctggcc tcgagggtcg 180

cggctacata tacatagttg agccaacagg accgttcgaa gacgatccga atcttacgaa 240

caaaaaattt cccggtaatc caacacagtc ctatagaacc tgcgaaccct tgagaattgt 300

tggcgttgtt gaagactggg aggggcatcc tgttgaatta ataaggggaa tgttggattc 360

gttagaggac ttaaagcgcc gtggtttaca cgtcattgaa g 401

<210> 907
<211> 742
<212> DNA
<213> Staphylococcus aureus

<400> 907
tacgatgaca ccagtctttg aattgaaaaa tgtcaattac tactatgatc ataaaaaagt 60

gttagaaaat ataaacatta aaataaataa aggtgaattt ttagcaattg ttggaccaaa 120

tggtgctggt aaatcaacat tattgaagtt gattctaggg ttattacctt tacaaagtgg 180

tgagattttt gttggaggta ttgattttaa aaataagaaa acatccatta aattaagcta 240

tgtatcacaa aaagcaaatg cctttaattc aggtttccca gcaagtgtta aagaagttgt 300

tttaagcgga ttaacaaaga caaaacgtct tttccaaaca tttaatagca aagataatga 360

aaaagtgatt aaagtactag aaagactgaa tataagtgat ttaattcata aaaatatagc 420

agaattatca ggtggtcaac aacaacgtgt aatgattgct cgagcattga tttcagaacc 480

tgcagtatta gtacttgatg aaccaacgaa tggtattgat gcaaaaacatg taagtgaatt 540

ttataatact ttagatcaat taaaacaaga aggtatcacc attatcttag ttactcatga 600

tatcggtgtt gtagcagata ctgctactga agtagcatgt ttaaataagc atttgcattt 660

ccatggtaca actgatgagt ttaaatcact tgatgaagtt gaaatttcaa aaatttatgg 720

acatcctgta cgttttgtcg at 742

<210> 908
<211> 352
<212> DNA
<213> Staphylococcus aureus

<400> 908
tagcaacctc cctttgatac aagaaagctt tttctacaag ctgtttaaca tgctcatcat 60

ctagtgaata atagactact tttccttctt tacggtattt tgctatacct aaatttttca 120

ataatcttaa atgatgggat gccgtagccg ttgaagattc aatgatatta gctacatcac 180

aaacacataa ctctccctct aaagacaaaa cataagcaat tttaactctt gtatcatctg 240

atagagcctt aaaaactttc gctacatcca taggattctg tttagcaagg tctttttag 300

ccctgtttac cttatcttca tgaatatagg taacttcaca catatctttt gt 352

<210> 909
<211> 583
<212> DNA
<213> Enterococcus faecalis

<400> 909
gcgtagaacg tggacttgat ccattgaaga caatgcttgt ggtcatgagc aattctgaaa 60

attcaggtgg cctggtactc gctgcttccc ctatggcaaa aaaagtatta ggtatttcca 120

atgttacaag gaaaaatgaa gttccggacc acccaaactt aattattgta cctccacgca 180

tgaaattata catgaagaaa aatcaagaaa ttaacaattt atataaccgc tttgtttcta 240

atgaagatca ttctgtattc agtgtcgatg aatcgtttct tgatgtgact gcttcgctga 300

cctattttaa gtgtgacacc gcctataaac tggccaagat tattcaacgt gtgatttata 360

accatatggg attgtatgta acaatcggaa ttggggaaaa tccgttgctg gccaagttag 420

cattggataa tgaagcaaag aatgcaccag gctttgtggc tgaatggcgc tatgaagatg 480

tgccagaaaa agtttggcca atctcccctc ttacagaatt ttgtgggata ggaaatcgca 540

tggctgctcg cttaaaaaag ctaggtattc ggtccattta tga 583

<210> 910
<211> 231
<212> DNA
<213> Candida albicans

<400> 910
atggcttgtt ctgctgctca atgtgtctgt gctcaaaaat ccacttgttc atgtggtaaa 60

caaccagctt taaaatgtaa ttgttctaaa gcttcagtag aaaatgttgt tccatcatca 120

aatgatgctt gtgcttgtgg aaaaagaaat aaatcaagtt gtacttgtgg tgctaatgct 180

atttgtgatg gtactagaga tggtgaaact gatttcacta acttgaaata a 231

<210> 911
<211> 240
<212> DNA
<213> Candida albicans

<400> 911
ctaagatgtc gtcgcaagat gaatctaaat tagaaaaggc aattagtcaa gactcttcct 60

cagaaaacca ttccattaat gaataccacg ggtttgatgc ccatacaagt gaaaacattc 120

agaatttagc cagaactttc actcatgatt ctttcaaaga tgactcgtca gcaggtttat 180

tgaaatactt aacccatatg tcagaagtgc ccggggtcaa tccatatgaa catgaagaaa 240

<210> 912
<211> 513
<212> DNA
<213> Candida albicans

<400> 912
gctgaattat ctaaattacc aagagataat gatccagaag cacttttgaa atatgctgca 60

ccactttgga aacaatactt attggtcagt tggagaacta ttgttcaaga ttggagatca 120

ccaggatata tttattctaa aatctttttg gttgtttcag cagcattatt taatggattt 180

tcatttttca aagctaaaaa caacatgcaa ggtttacaaa atcaaatgtt ttcggtgttt 240

atgtttttca ttccatttaa tactttggtg caacaaatgt taccatactt tgtgaagcaa 300

cgtgatgttt atgaagtgag agaagctcca tcaagaacat tcagttggtt tgcatttatt 360

gccggtcaaa ttacatcaga aattccttat caagttgccg ttggtaccat agcatttttc 420

tgttggtatt atccattagg attgtataat aatgctacac caactgattc tgtcaatcct 480

cgaggtgttt taatgtggat gcttgttact gca 513

<210> 913
<211> 609
<212> DNA
<213> Candida albicans

<400> 913
ggtggtaaat taagagattt ggtcatccgt gatgctccac tcaaacaaca attattgcaa 60

gaagctaaaa ctttacctgc tttgacgtta actgctagac aattatgtga tttagaatta 120

attttaaacg gagggttttc tccattaact ggattcttaa atcaagaaga ttataatagt 180

gttgttaacg atttaagatt aagtagtgtt aagaatgaat caaatggtaa aggtttatta 240

tggccaatcc caatcacctt agatgttgat gagaccactt ctaaaaaaca ttctgttggt 300

gatagaattg tattaataga tttgagagat gaaactccat tggccatttt aactattgaa 360

tctatttata aacctgataa aaaattagaa gcaaaaaaag tgttccgtgg tgatccagaa 420

catcctgcta ataaatattt attagaaacc gctggcgatt attatatcgg tggtgaatta 480

caagggatca attatcctaa acattatgat tatgttgatg ctagaaaaac accaactgaa 540

ttgagacaag aatttgaaaa attgggttgg gctcaagaaa atattgttgc ctttcaaacc 600

agaaatcct 609

<210> 914
<211> 528
<212> DNA
<213> Candida albicans

<400> 914
tcatggatta tttgttcgtg gtgctaacca aatggatggg ccagagatgg ttacccagtg 60

tcctatccca cctggtgaaa catacttgta caacttcact gttactgatc aagtgggaac 120

ttattggtat catagccata caggggggtca gtatggagac ggtatgagag gtgtctttat 180

tattgaagat gatgatttcc cgtatcacta cgatgaagaa gttgttttaa ctttaagtga 240

ccattaccac aaatattcag gtgacatagg gcctgccttt ttaaccagat ttaatccgac 300

aggagcagaa ccgatccctc agaacttttt gttcaatgaa acaagaaatg ccacttggaa 360

ggtcgaacct ggaaaaactt actttgttag gattcttaat gttggtggtt ttgtatcaca 420

gtacttgtgg atggaagatc atgaatttac tattgttgag atcgatggcg tttacgttga 480

aaaaaacacc actgatttga tttatatcac agttgctcaa agatatgg 528

<210> 915
<211> 585
<212> DNA
<213> Candida albicans

<400> 915
aaacggtcca gagttgaaga aaaagttgta tcgtcagatt tggctagggg cggggctagg 60

tgttcttatt tgtataatca ttggtggcgc ttttattggt accttttacg ggttgggtaa 120

agatatctgg ggaaaatcag aagacttgtg ggaagggata ttttgtatca ttgccacagt 180

cttgatcact gctatgggta ttccaatgtt gagaatcaac aagatgaaag aaaaatggag 240

agttaaatta gcacaagctt taatcaaatc tccagaaaat aagaagaacc gattcaaatt 300

gggatatctt gggaaaaagt acgcactttt tattttgcca ttcatcactt gcttgcgtga 360

aggtttagaa gctgttgttt tcgttggtgg ggtcggtatt actagtcctg cttcatcttt 420

cccaatccca gttattgttg gtataatttg tggtcttgca gtgggtgcct tgttgtacta 480

ctttggttcc aatatgtcga tgcaaatctt cttgatcatc tccacttgta tcttgtactt 540

gatcgctgct ggtttgttct ccagaggtgt ctggttcttt gagag 585

<210> 916
<211> 560
<212> DNA
<213> Candida albicans

<400> 916
tgttattggt tatggtgttg gcccattggt tttcagtccg atgtcagaaa atgctatatt 60

tggtcgtaca tccatatata tcataacatt atttttattt gtcatactac aaatccccac 120

tgctttggta aataatattg ccggtttatg tatattgaga ttcttgggtg gattctttgc 180

tagtccttgt ttggccactg gtggtgctag tgttgctgat gtggttaaat tttggaattt 240

accagttggg ttagccgctt ggagtttggg tgctgtttgt ggtcctagtt ttggtccatt 300

ctttggttca attttaactg tcaaagccag ttggagatgg actttttggt tcatgtgtat 360

tatttctggg ttttcatttg ttatgttgtg tttcacttta cctgaaactt ttggcaaaac 420

attattgtat cgcaaggcta aaagattgag agccatcacc ggtaacgaca gaatcacaag 480

tgaaggagaa attgaaaata gcaaaatgac aagtcatgaa ttgatcattg atacattatg 540

gagaccatta gaaatcaccg 560

<210> 917
<211> 574
<212> DNA
<213> Candida albicans

<400> 917
attccttggt ttggttctgc agcttcatat ggtcaacaac cttatgaatt tttcgaatca 60

tgtcgtcaaa agtatggtga tgtattttca tttatgttat tagggaaaat tatgacggtt 120

tatttaggtc caaaaggtca tgaatttgtt ttcaatgcta aattatctga tgtttctgct 180

gaagatgctt ataaacattt aactactcca gttttcggta aaggggttat ttatgattgt 240

ccaaattcta gattaatgga acaaaaaaaa tttgctaaat ttgctttgac tactgattca 300

tttaaaagat atgttcctaa gattagagaa gaaattttga attattttgt tactgatgaa 360

agtttcaaat tgaaagaaaa aactcacggg gttgccaatg ttatgaaaac tcaaccagaa 420

attactattt tcactgcttc aagatcttta tttggtgatg aaatgagaag aatttttgac 480

cgttcatttg ctcaattata ttctgattta gataaaggtt ttacccctat taattttgtt 540

ttccctaatt tacctttacc tcattattgg agac 574

<210> 918
<211> 647
<212> DNA
<213> Candida albicans

<400> 918
gctctttgct tcaattatcc gaagctgaag atgaatctgt ctacaaggcc agctttgatg 60

acaccgtgca agaaattgat ctgttattga ttgctttcaa agacctcctt agacttttac 120

gacccaaaga taaatccaac aaattcgata catacgaatt gaaatttcat tctttgaagc 180

acaaattgcg tgagttgcaa gtatttatta atgatcaaca acaagacaag ttgcatgaat 240

ataggataaa gcatttccat ctacaagatc tgcctgtgga taccatcaat aacgaatttg 300

ctcgagacca attatttgct gatcgttcca ctaagaagac taagaaagaa atggaagcat 360

ctataaatca acaaattgtc agccaaaata aacaaataac aaaatccttg caagcatcga 420

gacaattgtt atcagcaggt atattgcaga gtgaattgaa cattgacaac attgatcagc 480

aaaccaagga tttatacaag ttaaatgaag gatttatcca attcaacgat ttgttaaata 540

gatctaagaa aattgtcaag tttattgaaa agcaagataa agctgaccgt caacgtatat 600

atttgagtat ggggttcttc atactttgtt gttcttgggt ggtttat 647

<210> 919
<211> 552
<212> DNA
<213> Glycine max

<400> 919
atccaagttg aaagagataa attgaacaag tatggtcgtc ccctattagg atgtactatt 60

aaacctaaat tggggttatc cgctaagaat tatggtagag ctgtttatga atgtcttcgt 120

ggtggacttg attttaccaa agatgatgaa aatgtgaatt cccaaccatt tatgcgttgg 180

agagaccgtt tcttattttg tgccgaagcc atttttaaat cacaggctga aacaggtgaa 240

atcaaagggc attacttgaa tgcaactgcg ggtacatgcg aagaaatgat gaaaagagct 300

gtatttgcca gagaattagg cgttcctatc gtaatgcatg attatttaac agggggattc 360

actgcaaata ctagcttagc tcattattgc cgagataatg gtctacttct tcatatacac 420

cgtgcaatgc atgcagttat cgacagacaa aagaatcatg gtatgcactt tcgtgtacta 480

gctaaagcat tacgtttgtc tggtggagat catgttcacg ccggtaccgt agtaggtaaa 540

cttgaagggg aa 552

<210> 920
<211> 358
<212> DNA
<213> Homo sapiens

<400> 920
gctcaagggg caaatgcagc atgtacagca ttggcagtgg tgcctcagag gtggcagaac 60

tatttcacac aaaccagttt aggactacac aaattagtac catccagcat caggatatag 120

ctgtggattt tacaaaccat tcctatttct aacttcagga attgatgttt ttcccagtcc 180

atcttaaaat attactgctt taatcacaga tcagataaaa aggatatcag gcacaacctc 240

caactaaagt cctgttgtag catagacagt gaaatgctat gacatcagaa gactttaaaa 300

ttgcagctct tttcggatcc cccaaagtgt gtctgcacgc ttcttcaaac gggcctct 358

<210> 921
<211> 271

<212> DNA
<213> Homo sapiens

<400> 921
cggagtcaac ggatttggtc gtattggatg cctggtcacc agggttgctt ttaactctgg 60

aaaagtggat attgtcgcca tcaatgaccg cttcattgac ctcaactaca tggtctacat 120

gttccagtag gattttacct atggcaaatt ccatgcaccg taaaggctga gaatgggaag 180

cttgtcatca gtggaaatcc cattaccatc ttccaggagc gagatccctc caaaatcaaa 240

tggggcaatg ctgacgctga gtacgttgtg g 271

<210> 922
<211> 239
<212> DNA
<213> Homo sapiens

<400> 922
atggataatg atatcgccac gctcgtcatg gacaatggct ctcccatgtg caaggccagc 60

ttagcaggcg acgatgcccc tccatcgtga ggcacccatg gcaccagggc atgatcgtgg 120

gcatgggtca gaagaagtcc tacgtggaca atgaggccca gggcaagaga agcatcctga 180

ccctgaaata ccctatcgag catggcattg tcaccaatgg agaagatctg gcaccacac 239

<210> 923
<211> 365
<212> DNA
<213> Homo sapiens

<400> 923
gccaaattgc caaaactcaa gtcacctcag taccatccag gaggctgggt attgtcctgc 60

ctctgccttt tctgtctcag cgggcagtgc ccagagccca caccccccca agagccctcg 120

atggacagcc tcacccaccc cacctgggcc cagccaggag ccccgcctgg ccatcagtat 180

ttattgcctc cgtccgtgcc gtccctgggc cactggcctg gcgcctgttc ccccaggctc 240

tcagtgccac cacccccggc aggccttccc tgacccagcc aggaacaaac aagggaccaa 300

gtgcacacat tgctgagagc cgtctcctgt gcctccccg ccccatcccc ggtcttcgtg 360

ttgtg 365

<210> 924
<211> 342
<212> DNA
<213> Homo sapiens

<400> 924
caccctggat ttgcatacat tcttcaagat cccatttgaa ttttttagtg actaaaccat 60

tgtgcattct agagtgcata tatttatatt ttgcctgtta aaaagaaagt gagcagtgtt 120

agcttagttc tcttttgatg taggttatta tgattagctt tgtcactgtt tcactactca 180

gcatggaaac aagatgaaat tccatttgta ggtagtgaga caaaattgat gatccattaa 240

gtaaacaata aaagtgtcca ttgaaaccgt gatttttttt tttttcctgt catactttgt 300

taggaagggt gagaatagaa tcttgaggaa cggatcagat gt 342

<210> 925
<211> 552
<212> DNA
<213> Glycine max

<400> 925
atccaagttg aaagagataa attgaacaag tatggtcgtc ccctattagg atgtactatt 60

aaacctaaat tggggttatc cgctaagaat tatggtagag ctgtttatga atgtcttcgt 120

ggtggacttg attttaccaa agatgatgaa aatgtgaatt cccaaccatt tatgcgttgg 180

agagaccgtt tcttattttg tgccgaagcc atttttaaat cacaggctga aacaggtgaa 240

atcaaagggc attacttgaa tgcaactgcg ggtacatgcg aagaaatgat gaaaagagct 300

gtatttgcca gagaattagg cgttcctatc gtaatgcatg attatttaac agggggattc 360

actgcaaata ctagcttagc tcattattgc cgagataatg gtctacttct tcatatacac 420

cgtgcaatgc atgcagttat cgacagacaa aagaatcatg gtatgcactt tcgtgtacta 480

gctaaagcat tacgtttgtc tggtggagat catgttcacg ccggtaccgt agtaggtaaa 540

cttgaagggg aa 552

<210> 926
<211> 286
<212> DNA
<213> Pseudomonas aeruginosa

<400> 926
caggcctaac acatgcaagt cgagcggatg aagggagctt gctcctggat tcagcggcgg 60

acgggtgagt aatgcctagg aatctgcctg gtagtggggg ataacgtccg gaaacgggcg 120

ctaataccgc atacgtcctg agggagaaag tgggggatct tcggacctca cgctatcaga 180

tgagcctagg tcggattagc tagttggtgg ggtaaaggcc taccaaggcg acgatccgta 240

actggtctga gaggatgatc agtcacactg gaactgagac acggtc 286

<210> 927
<211> 643
<212> DNA
<213> Enterococcus faecium

<400> 927
aggataggta ggagccgtag aaatcggaac gctagtttcg atggaggcgc tggtgggata 60

ctacccctgc gttatggcca ctctaacccg caccactaat cgtggtggga gacagtgtca 120

gatgggcagt ttgactgggg cggtcgcctc ctaaaaggta acggaggcgc ccaaaggttc 180

cctcagaatg gttggaaatc attcgaagag tgtaaaggca gaagggagct tgactgcgag 240

accaacaagt cgagcaggga cgaaagtcgg gcttagtgat ccggtggttc cgcatggaag 300

ggccatcgct caacggataa aagctaccct ggggataaca ggcttatctc ccccaagagt 360

ccacatcgac ggggaggttt ggcacctcga tgtcggctcg tcgcatcctg gggctgtagt 420

cggtcccaag ggttgggctg ttcgcccatt aaagcggcac gcgagctggg ttcagaacgt 480

cgtgagacag ttcggtccct atccgtcgcg ggcgttggaa atttgagagg agctgtcctt 540

agtacgagag gaccgggatg gacttaccgc tggtgtacca gttgttctgc caaggttttt 600

gctgggtagc tatgtaggga agggataaac gctgaaagca tct 643

<210> 928
<211> 245
<212> DNA
<213> Streptococcus pyogenes

<400> 928
gcgtgagtga aagaaggttt tcggatcgta aagctctgtt gttagagaag aatgatggtg 60

ggagtggaaa atccaccaag tgacggtaac taaccagaaa gggacggcta actacgtgcc 120

agcagccgcg gtaatacgta ggtcccgagc gttgtccgga tttattgggc gtaaagcgag 180

cgcaggcggt tttttaagtc tgaagttaaa ggcattggct caaccaatgt acgctttgga 240

aactg 245

<210> 929
<211> 240
<212> DNA
<213> Streptococcus pneumoniae

<400> 929
ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag ggaatcttcg 60

gcaatggacg gaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt tcggatcgta 120

aagctctgtt gtaagagaag aacgagtgtg agagtggaaa gttcacactg tgacggtatc 180

ttaccagaaa gggacggcta actacgtgcc agcagccgcg gtaatacgta ggtcccgagc 240

<210> 930
<211> 242
<212> DNA
<213> Streptococcus agalactiae

<400> 930
cacggcccag actcctacgg gaggcagcag tagggaatct tcggcaatgg acggaagtct 60

gaccgagcaa cgccgcgtga gtgaagaagg ttttcggatc gtaaagctct gttgttagag 120

aagaacgttg gtaggagtgg aaaatctacc aagtgacggt aactaaccag aaagggacgg 180

ctaactacgt gccagcagcc gcggtaatac gtaggtcccg agcgttgtcc ggatttattg 240

gg 242

<210> 931
<211> 250
<212> DNA
<213> Enterococcus faecium

<400> 931
gtgcattagc tagttggtga ggtaacggct caccaaggcc acgatgcata gccgcacctg 60

agagggtgat cggccacatt gggactgaga cacggcccaa actctacggg aggcagcagt 120

agggaatctt cggcaatgga cgaaagtctg accgagcaac gccgcgtgag tgaagaaggt 180

tttcggatcg taaaactctg ttgttagaga agaacaagga tgagagtaac tgttcatccc 240

ttgacggtat 250

<210> 932
<211> 263
<212> DNA
<213> Enterococcus faecium

<400> 932
tgcctataca tgcaagtcga acgcttcttt ttccaccgga gcttgctcca ccggaaaaag 60

aggagtggcg aacgggtgag taacacgtgg gtaacctgcc catcagaaag ggataacact 120

tggaaacagg tgctaatacc gtataacaaa tcaaaaccgc atggttttga tttgaaaggc 180

gctttcgggt gtcgctgatg gatggacccg cggtgcatta gctagttggt gaggtaacgg 240

ctcaccaagg ccacgatgca tag 263

<210> 933
<211> 267
<212> DNA
<213> Enterococcus faecalis

<400> 933
ggcgtgccta atacatgcaa gtcgaacgct tctttcctcc cgagtgcttg cactcaattg 60

gaaagaggag tggcggacgg gtgagtaaca cgtgggtaac ctacccatca gagggggata 120

acacttggaa acaggtgcta ataccgcata acagtttatg ccgcatggca taagagtgaa 180

aggcgctttc gggtgtcgct gatggatgga cccgcggtgc attagctagt tggtgaggta 240

acggctcacc aaggcgacga tgcatag 267

<210> 934
<211> 200
<212> DNA
<213> Klebsiella pneumoniae

<400> 934
caggcctaac acatgcaagt cgagcggtag cacagagagc ttgctctcgg gtgacgagcg 60

gcggacgggt gagtaatgtc tgggaaactg cctgatggag ggggataact actggaaacg 120

gtagctaata ccgcataatg tcgcaagacc aaagtggggg accttcgggc ctcatgccat 180

cagatgtgcc cagatgggat 200

<210> 935
<211> 635
<212> DNA
<213> Staphylococcus aureus

<400> 935
acacggtcca gactcctacg ggaggcagca gtagggaatc ttccgcaatg ggcgaaagcc 60

tgacggagca acgccgcgtg agtgatgaag gtcttcggat cgtaaaactc tgttattagg 120

gaagaacata tgtgtaagta actgtgcaca tcttgacggt acctaatcag aaagccacgg 180

ctaactacgt gccagcagcc gcggtaatac gtaggtggca agcgttatcc ggaattattg 240

ggcgtaaagc gcgcgtaggc ggtttttttaa gtctgatgtg aaagcccacg gctcaaccgt 300

ggagggtcat tggaaactgg aaaacttgag tgcagaagag gaaagtggaa ttccatgtgt 360

agcggtgaaa tgcgcagaga tatggaggaa caccagtggc gaaggcgact ttctggtctg 420

taactgacgc tgatgtgcga aagcgtgggg atcaaacagg attagatacc ctggtagtcc 480

acgccgtaaa cgatgagtgc taagtgttag ggggtttccg ccccttagtg ctgcagctaa 540

cgcattaagc actccgcctg gggagtacga ccgcaaggtt gaaactcaaa ggaattgacg 600

gggacccgca caagcgtgga gcatgtggtt taatt 635

<210> 936
<211> 243
<212> DNA
<213> Enterococcus faecalis

<400> 936
gcattagcta gttggtgagg taacggctca ccaaggcgac gatgcatagc cgacctgaga 60

gggtgatcgg ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag 120

ggaatcttcg gcaatggacg aaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt 180

tcggatcgta aaactctgtt gttagagaag aacaaggacg ttagtaactg aacgtcccct 240

gac 243

<210> 937
<211> 274
<212> DNA
<213> Staphylococcus hominis

<400> 937
cgtgcctaat acatgcaagt cgagcgaaca gacgaggagc ttgctccttt gacgttagcg 60

gcggacgggt gagtaacacg taggtaacct acctataaga ctgggataac ttcgggaaac 120

cggagctaat accggataat atttcgaacc gcatggttcg atagtgaaag atggctttgc 180

tatcacttat agatggacct gcgccgtatt agctagttgg taaggtaacg gcttaccaag 240

gcaacgatac gtagccgacc tgagagggtg atcg 274

<210> 938
<211> 200
<212> DNA
<213> Staphylococcus haemolyticus

<400> 938
acacgtgggt aacctaccta taagactggg ataacttcgg gaaaccggag ctaataccgg 60

ataatatttc gaaccgcatg gttcgatagt gaaagatggt tttgctatca cttatagatg 120

gacccgcgcc gtattagcta gttggtaagg taacggctta ccaaggcgac gatacgtagc 180

cgacctgaga gggtgatcgg 200

<210> 939
<211> 287
<212> DNA
<213> Enterococcus faecium

<400> 939
cctttaggtg tattggtagg agagcgttct aagggcgtcg aaggcagatc gtgaggactg 60

ctggagcgct tagaagtgag aatgccggta tgagtagcga aagacaggtg agaatcctgt 120

ccaccgaatg actaaggttt cctggggaag gctcgtccgc ccagggttag tcgggaccta 180

agccgaggcc gacaggcgta ggcgatggat aacaggttga tattcctgta cccgttgttt 240

ttgtttgagc aatggaggga cgcaggaggc taaggaatgc agacgat 287

<210> 940
<211> 281
<212> DNA
<213> Proteus mirabilis

<400> 940
caggcctaac acatgcaagt cgagcggtaa caggagaaag cttgctttct tgctgacgag 60

cggcggacgg gtgagtaatg tatggggatc tgcccgatag agggggataa ctactggaaa 120

cggtggctaa taccgcataa tgtctacgga ccaaagcagg ggctcttcgg accttgcact 180

atcggatgaa cccatatggg attagctagt aggtggggta aaggctcacc taggcgacga 240

tctctagctg gtctgagagg atgatcagcc acactgggac t 281

<210> 941
<211> 200
<212> DNA
<213> Proteus vulgaris

<400> 941
tggttgatca tggctcagat tgaacgctgg cggcaggcct aacacatgca agtcgagcgg 60

taacaggaga aagcttgctt tcttgctgac gagcggcgga cgggtgagta atgtatgggg 120

atctgcccga tagaggggga taactactgg aaacggtggc taataccgca tgacgtctac 180

ggaccaaagc aggggctctt 200

<210> 942
<211> 309
<212> DNA
<213> Staphylococcus aureus

<400> 942
tctctgatgt tagcggcgga cgggtgagta acacgtggat aacctaccta taagactggg 60

```
ataacttcgg gaaaccggag ctaataccgg ataatatttt gaaccgcatg gttcaaaagt    120

gaaagacggt cttgctgtca cttatagatg gatccgcgct gcattagcta gttggtaagg    180

taacggctta ccaaggcaac gatgcatagc cgacctgaga gggtgatcgg ccacactgga    240

actgagacac ggtccagact cctacgggag gcagcagtag ggaatcttcc gcaatgggcg    300

aaagcctga                                                            309


<210>  943
<211>  183
<212>  DNA
<213>  Klebsiella oxytoca

<400>  943
ctaacacatg caagtcgaac ggtagcacag agagcttgct ctcgggtgac gagtggcgga     60

cgggtgagta atgtctggga aactgcccga tggaggggga taactactgg aaacggtagc    120

taataccgca taacgtcgca agaccaaaga gggggacctt cgggcctctt gccatcggat    180

gtg                                                                  183


<210>  944
<211>  548
<212>  DNA
<213>  Mus musculus

<400>  944
ataggtcggc ggttcatgcc ccccatgcag gagctattac acatgtactt gtagtggatg     60

gtggtatact cagagccggc ctgggggaag acacaggatc caggtgaagt cgctccctac    120

ctcactacag gtgacctgca gcagccggga atggctggct atagcctcta ataagtttca    180

gttttagttg tagagtaggg atattccacc tgttcggcac acctgctgga gctgtggggc    240

ccaacacttg cttagcatgg gagggaaccg gactcagcgt ctctatttcc cgcctggatg    300

gggaagcccc ttctcccaga gactgctgtt aaagtagacc ctgggctggg cacggcagct    360

tgcacctcta agcctagcta gcactcagga gggtgaggca aacgggttgc tagaaagtca    420

acatcagtct aggctggagt caactgtctc taagacgcac aaaccaaaac aaaattacag    480

acctcgggtg gctcataagg taccaccacg ctgtggcgaa aagtctgcct gtcttccaga    540

tactcggg                                                             548


<210>  945
<211>  577
```

<212> DNA
<213> Dictyostelium discoideum

<400> 945
attggagaag gtgcagcagg agaagtattt gtagcaacat catcaaagaa caataagaga 60

gttgcaatta aaaagattga aattaacaat gataatgcca aactcttggt aacagagatt 120

gcaattatga agacatcaca tcatgataac attgtaaatt acattgatag ttatatagtg 180

aacgatagag aactttgggt tgcaatggag tttatgggtg gtggttgttt aacagacatt 240

ttagaggcat ttgataatat caaaatgagt gagattcaaa ttgcttatgt ggttaaagag 300

accttgaagg cattgcaata cattcatagt cttcatcgta ttcatagaga tataaagagt 360

gataatattt tattgggctc agagggtagt gtaaagattg ctgattttgg ttatgccgct 420

caattaactc aaaaacaaca aaaacgtaat accgtcgttg gtaccccta ttggatggcc 480

ccagaactca ttagaggtca cgattatggt gtcaaggttg atatttggtc tttgggtatc 540

atgatgatgg aaatggctga aggtgaacca ccttata 577

<210> 946
<211> 963
<212> DNA
<213> Mus musculus

<400> 946
ggaagccaca ctgctacaca gggttgtcaa acgactttga ccttccccaa gatgtgaggg 60

catagtaact ataacatcag gttcctggaa aatttagctg aaagacagaa gcaagcactg 120

aacatggccc cgagatctac gtaccgggta cccattgaga ggctggaaat acaggctggt 180

gtctgtaatg cacacatgcc cagggttcgt cactagaggt gttaccatct ctgctttgca 240

ctccatgtgc agcttttcag aaacactttg gaacctgcaa agatgtttcc agcaaaagta 300

agaaaagtta ggaaccaatc cactgcctcg gcttaacctc agtgtgagtg agcttgctta 360

cctgccgaaa cactacagtc atcaagtggc tgcttaaata aggttgacat gctttcaaat 420

ggcacaatgg aggcctggct tgtttattaa ttgaagagct tacatatcac agaaacaaat 480

gtctcctaac tgatcagtcc tgaagctctt tctccatcat gtgacttcct acttttatat 540

tgttaagacc gacttttaga gcctacataa agagcagcgg tgctacgttt tatgccagca 600

ctaggaggaa gctgagacag gagcttgggc cacagagaaa gaccctaccc ttagcacact 660

tcctttatca gggttagaac acataattac aattgctttt aggtcagttt catttctcca 720

tataaaacca ctcaaagatg ccttttctac tcctaaaatg cttaactaaa aaataactcc 780

atttctgatt tgtgaattta aaaagtagtg tggaaacaac taaattatca atattcttgg 840

atgattactt tgttaaataa ctggattaac agtaaatctc agggtctaga agtgcagctc 900

ggtgctagag cagcgctgat catgctggag cctggctcag tcctggcacc gagataacta 960

agg 963

<210> 947
<211> 538
<212> DNA
<213> Dictyostelium discoideum

<400> 947
ccaccggttt aacttggaat ccaaaaggtg gagatgctaa atctgctaca ccagcaccag 60

cttcatcagc accagccgcc ccagttgcac cagctgtttc atccactcca gttgaatcaa 120

agaaaggtcc aggtttaggt gcagttttcg gtgaacttag caaaggtgat ggtgttacca 180

gtggtttaaa aaaagttacc aacgatatga aatccaaaaa tttcaccgac aaatcatcag 240

ttgttaaagc tgctgatact aaagtcgcca aagttgatgc tccatctaga ccagccgttt 300

ttgctctcca aggtaacaaa tggtccattg aatatcaagt taacaacaaa gaaattgtca 360

ttgccgagcc agatagtcgt caaactgttt acattttcca atgtgtaaac tctttagttc 420

aaatcaaagg taaagttaat gcaattactc ttgatggttg taaaaagact tcaatcgttt 480

tcgaaaatgc catttcctct tgtgaagttg tcaattgtaa tggtgttgaa atccaagt 538

<210> 948
<211> 26
<212> DNA
<213> synthetic construct

<400> 948
taaattgttt agattacaat cagagg 26

<210> 949
<211> 22
<212> DNA
<213> synthetic construct

<400> 949
ttcaaagttt tcgtatgttt ca 22

<210> 950
<211> 19
<212> DNA

<213> synthetic construct

<400> 950
cgtgtttggg ttaaattcc 19

<210> 951
<211> 20
<212> DNA
<213> synthetic construct

<400> 951
ataatggtgt gttcctccac 20

<210> 952
<211> 20
<212> DNA
<213> synthetic construct

<400> 952
aaaagaaaaa cacgcaattc 20

<210> 953
<211> 20
<212> DNA
<213> synthetic construct

<400> 953
cattcgtcaa ctgattcgta 20

<210> 954
<211> 21
<212> DNA
<213> synthetic construct

<400> 954
tagcatagca acaaacagtg a 21

<210> 955
<211> 21
<212> DNA
<213> synthetic construct

<400> 955
gttttgacct gaagctgtat c 21

<210> 956
<211> 20
<212> DNA
<213> synthetic construct

<400> 956
aacaaagcag atgcgatagt 20

<210> 957
<211> 20
<212> DNA
<213> synthetic construct

<400> 957
gaaatacgat gcggtttatc 20

<210> 958
<211> 18
<212> DNA
<213> synthetic construct

<400> 958
ctaggcgcat tagcagtt 18

<210> 959
<211> 20
<212> DNA
<213> synthetic construct

<400> 959
tagccttctc ttccatttca 20

<210> 960
<211> 21
<212> DNA
<213> synthetic construct

<400> 960
aatgctgcta acctgcgtga t 21

<210> 961
<211> 24
<212> DNA
<213> synthetic construct

<400> 961
cacgtctaac cgctttactg attg 24

<210> 962
<211> 30
<212> DNA
<213> synthetic construct

<400> 962
aaagtaaaga gtagactaag ctgtctgctc 30

<210> 963
<211> 25
<212> DNA
<213> synthetic construct

<400> 963
acctaataaa attcaagcat tggga 25

<210> 964
<211> 27
<212> DNA
<213> synthetic construct

<400> 964
aagaatttaa aatggttagg tgtcgta 27

<210> 965
<211> 24
<212> DNA
<213> synthetic construct

<400> 965
acgtaatcgt tttgttgcca aata 24

<210> 966
<211> 22
<212> DNA
<213> synthetic construct

<400> 966
aacgtcccat gccattaatt tt 22

<210> 967
<211> 24
<212> DNA
<213> synthetic construct

<400> 967
ttgcgtttct atttagctca gaca 24

<210> 968
<211> 23
<212> DNA
<213> synthetic construct

<400> 968
acagagcagc aaaagcgtta gtg 23

<210> 969
<211> 24
<212> DNA
<213> synthetic construct

<400> 969
gaccttgaat gaaccattga ccat 24

<210> 970
<211> 30
<212> DNA
<213> synthetic construct

<400> 970
catatggtga ttttacattc ttcttaattg 30

<210> 971
<211> 28
<212> DNA
<213> synthetic construct

<400> 971
cctaaccatg tactttgtaa cactttca 28

<210> 972
<211> 29
<212> DNA
<213> synthetic construct

<400> 972
aaatttatta gcagaagtag cagaaaatg 29

<210> 973
<211> 27
<212> DNA
<213> synthetic construct

<400> 973
ctgaactctt ctaatgcttc aacgatt 27

<210> 974
<211> 24
<212> DNA
<213> synthetic construct

<400> 974
tttaggcgaa aatattggtg aaga 24

<210> 975
<211> 24

<212> DNA
<213> synthetic construct

<400> 975
tttgtcgtcg tcttttactt cgtt 24

<210> 976
<211> 26
<212> DNA
<213> synthetic construct

<400> 976
ggtcttatcg ttgcagctat cactat 26

<210> 977
<211> 26
<212> DNA
<213> synthetic construct

<400> 977
gagcgtatcg cataaataat cttttc 26

<210> 978
<211> 24
<212> DNA
<213> synthetic construct

<400> 978
tcaggtgaaa tgttagaatc agca 24

<210> 979
<211> 23
<212> DNA
<213> synthetic construct

<400> 979
taagtcacca aataagaatg gcg 23

<210> 980
<211> 21
<212> DNA
<213> synthetic construct

<400> 980
tagtcaccat gaagttgccc c 21

<210> 981
<211> 23
<212> DNA
<213> synthetic construct

<400> 981
cctcttgaag atggtacacg gat 23

<210> 982
<211> 22
<212> DNA
<213> synthetic construct

<400> 982
cgaatgatgc aatcagacga aa 22

<210> 983
<211> 23
<212> DNA
<213> synthetic construct

<400> 983
caccacgatt tattggcaaa gtt 23

<210> 984
<211> 23
<212> DNA
<213> synthetic construct

<400> 984
ttgaatcacc aaattgaggt tgt 23

<210> 985
<211> 25
<212> DNA
<213> synthetic construct

<400> 985
cagtcgttca gatttgaatt tcttt 25

<210> 986
<211> 28
<212> DNA
<213> synthetic construct

<400> 986
aaatccatcg agatggtaat atatatca 28

<210> 987
<211> 31
<212> DNA
<213> synthetic construct

<400> 987

aaacttaaaa tactttctga atattgatca t 31

<210> 988
<211> 23
<212> DNA
<213> synthetic construct

<400> 988
gtatgcaatt tgatcgtggt tat 23

<210> 989
<211> 21
<212> DNA
<213> synthetic construct

<400> 989
tgttaatgca tcgccttcaa c 21

<210> 990
<211> 30
<212> DNA
<213> synthetic construct

<400> 990
atgtatgtta gcactcttta atgttaagtg 30

<210> 991
<211> 24
<212> DNA
<213> synthetic construct

<400> 991
gtttagttgt gtttcatttt cgtt 24

<210> 992
<211> 29
<212> DNA
<213> synthetic construct

<400> 992
tgtcatatta tcaacatgta atcgaactg 29

<210> 993
<211> 29
<212> DNA
<213> synthetic construct

<400> 993
aatatcagta attccagaac caagaagat 29

<210> 994
<211> 26
<212> DNA
<213> synthetic construct

<400> 994
aaaatgatca aaggtgaaga aacatc 26

<210> 995
<211> 25
<212> DNA
<213> synthetic construct

<400> 995
aatcctcgac atttaatgca cctac 25

<210> 996
<211> 27
<212> DNA
<213> synthetic construct

<400> 996
aatgggatta ttagttatgg cttatgg 27

<210> 997
<211> 26
<212> DNA
<213> synthetic construct

<400> 997
gtggatatgg atcattattc ttttcg 26

<210> 998
<211> 27
<212> DNA
<213> synthetic construct

<400> 998
atgagatata cgaaatcaga agaagca 27

<210> 999
<211> 32
<212> DNA
<213> synthetic construct

<400> 999
ctaatcttaa agtatccaat gtagcttctg ta 32

<210> 1000

<211> 29
<212> DNA
<213> synthetic construct

<400> 1000
aaacagcaag atcctaatat tgatgtaac 29

<210> 1001
<211> 32
<212> DNA
<213> synthetic construct

<400> 1001
ctctacgtac aatcgatact aattcattat ct 32

<210> 1002
<211> 26
<212> DNA
<213> synthetic construct

<400> 1002
attaacaaaa ttgatttacc tgctgc 26

<210> 1003
<211> 27
<212> DNA
<213> synthetic construct

<400> 1003
ctataaccaa aacctaatgc ttgtgac 27

<210> 1004
<211> 21
<212> DNA
<213> synthetic construct

<400> 1004
aaagacgcat caaaaccagc a 21

<210> 1005
<211> 29
<212> DNA
<213> synthetic construct

<400> 1005
ggctaatgac acctaaagag ttaacaact 29

<210> 1006
<211> 28
<212> DNA

<213> synthetic construct

<400> 1006
gattaaccac ttagcactaa acacacct 28

<210> 1007
<211> 24
<212> DNA
<213> synthetic construct

<400> 1007
aatgtttaac aagcacttca cgct 24

<210> 1008
<211> 20
<212> DNA
<213> synthetic construct

<400> 1008
cgacaaacac ccaacaagca 20

<210> 1009
<211> 22
<212> DNA
<213> synthetic construct

<400> 1009
tggctgttat acgcttggtt gt 22

<210> 1010
<211> 28
<212> DNA
<213> synthetic construct

<400> 1010
gttatcgtat taactggtga aggtgatt 28

<210> 1011
<211> 26
<212> DNA
<213> synthetic construct

<400> 1011
acatttagta cattaccgcc acctac 26

<210> 1012
<211> 25
<212> DNA
<213> synthetic construct

<400> 1012
cgtaagggaa gtagttatca gtccg 25

<210> 1013
<211> 26
<212> DNA
<213> synthetic construct

<400> 1013
ttagctgtat actcgaaatc caatcc 26

<210> 1014
<211> 28
<212> DNA
<213> synthetic construct

<400> 1014
atggactttt ggttatataa acaagcac 28

<210> 1015
<211> 25
<212> DNA
<213> synthetic construct

<400> 1015
tatttcagca atgtcacccg tatta 25

<210> 1016
<211> 26
<212> DNA
<213> synthetic construct

<400> 1016
attgataatt tacatccaac acctgc 26

<210> 1017
<211> 29
<212> DNA
<213> synthetic construct

<400> 1017
tcactatctg gatcagaatc tttaacaat 29

<210> 1018
<211> 31
<212> DNA
<213> synthetic construct

<400> 1018
atgaggtact ctttaattag tggtatcttg a 31

<210> 1019
<211> 25
<212> DNA
<213> synthetic construct

<400> 1019
atcagctaat gaaatgaaga ttgca 25

<210> 1020
<211> 27
<212> DNA
<213> synthetic construct

<400> 1020
gaaaatacag aacttgatgg tgaaatg 27

<210> 1021
<211> 27
<212> DNA
<213> synthetic construct

<400> 1021
gcaagactca catacaccat aaacttc 27

<210> 1022
<211> 27
<212> DNA
<213> synthetic construct

<400> 1022
tcgtttacat cataataatc atcagac 27

<210> 1023
<211> 24
<212> DNA
<213> synthetic construct

<400> 1023
acacagagaa taaccaggag aaga 24

<210> 1024
<211> 26
<212> DNA
<213> synthetic construct

<400> 1024
ttgtaattca cttaacttca ccaatg 26

<210> 1025
<211> 21
<212> DNA
<213> synthetic construct

<400> 1025
tcaagttgcg aaattagctg a 21

<210> 1026
<211> 25
<212> DNA
<213> synthetic construct

<400> 1026
actcaaacag ttagcaagat tgctc 25

<210> 1027
<211> 20
<212> DNA
<213> synthetic construct

<400> 1027
tgcatttacc caaccagtgc 20

<210> 1028
<211> 27
<212> DNA
<213> synthetic construct

<400> 1028
ggtgttccaa actcaaaaga tgatata 27

<210> 1029
<211> 30
<212> DNA
<213> synthetic construct

<400> 1029
ttgacaccat aactcattat aggaatattg 30

<210> 1030
<211> 24
<212> DNA
<213> synthetic construct

<400> 1030
aacacaatcg gaaatgttgg atac 24

<210> 1031
<211> 25

<212> DNA
<213> synthetic construct

<400> 1031
ctatcccaat ccatagacgt gttaa 25

<210> 1032
<211> 24
<212> DNA
<213> synthetic construct

<400> 1032
tgacatttca aatcaatcac atcg 24

<210> 1033
<211> 24
<212> DNA
<213> synthetic construct

<400> 1033
ttggtaacca aacattttca gctt 24

<210> 1034
<211> 27
<212> DNA
<213> synthetic construct

<400> 1034
ctggagatac tattgaagaa gacgatg 27

<210> 1035
<211> 28
<212> DNA
<213> synthetic construct

<400> 1035
ttgcttttac agttctgttt tcatctac 28

<210> 1036
<211> 30
<212> DNA
<213> synthetic construct

<400> 1036
tagttatcga gattatcaaa gattggtaga 30

<210> 1037
<211> 27
<212> DNA
<213> synthetic construct

<400> 1037
gtaattgtga gtgtccataa gaatcca 27

<210> 1038
<211> 30
<212> DNA
<213> synthetic construct

<400> 1038
tgaatcttaa tatagaaaca accactcaag 30

<210> 1039
<211> 24
<212> DNA
<213> synthetic construct

<400> 1039
acgatctgac acacctaaaa tgta 24

<210> 1040
<211> 24
<212> DNA
<213> synthetic construct

<400> 1040
tctaaagaag attttatcga aatg 24

<210> 1041
<211> 24
<212> DNA
<213> synthetic construct

<400> 1041
cccacattgt tattttcttt gtat 24

<210> 1042
<211> 26
<212> DNA
<213> synthetic construct

<400> 1042
tgagatagat gcaatcatgt ttatgg 26

<210> 1043
<211> 32
<212> DNA
<213> synthetic construct

<400> 1043

gaaataggta caatctctgt aaagtccata ta 32

<210> 1044
<211> 30
<212> DNA
<213> synthetic construct

<400> 1044
aatataattg ggaagaagta catcaagaag 30

<210> 1045
<211> 27
<212> DNA
<213> synthetic construct

<400> 1045
atattagcaa atcggtctta tctctca 27

<210> 1046
<211> 24
<212> DNA
<213> synthetic construct

<400> 1046
ttgaattacc aaaattacca tacg 24

<210> 1047
<211> 26
<212> DNA
<213> synthetic construct

<400> 1047
ctcccagaat aatgaatggt ttaaat 26

<210> 1048
<211> 18
<212> DNA
<213> synthetic construct

<400> 1048
gcgcattttg aaaaggca 18

<210> 1049
<211> 22
<212> DNA
<213> synthetic construct

<400> 1049
gggatagcac gtaaaagtgg aa 22

<210> 1050
<211> 22
<212> DNA
<213> synthetic construct

<400> 1050
ttcgttgttc ataggtgcga gt 22

<210> 1051
<211> 20
<212> DNA
<213> synthetic construct

<400> 1051
ctttgaacag cactcgtgcg 20

<210> 1052
<211> 28
<212> DNA
<213> synthetic construct

<400> 1052
tattgcctta tttagatgta ttgctttt 28

<210> 1053
<211> 24
<212> DNA
<213> synthetic construct

<400> 1053
tcgtagcttc aaacacattt tcaa 24

<210> 1054
<211> 28
<212> DNA
<213> synthetic construct

<400> 1054
aatcaaatga tattggaaga tattagca 28

<210> 1055
<211> 28
<212> DNA
<213> synthetic construct

<400> 1055
tattcagtat cttgtgctat tgtcattg 28

<210> 1056

<211> 25
<212> DNA
<213> synthetic construct

<400> 1056
catgcggtaa caattctgat aaaga 25

<210> 1057
<211> 22
<212> DNA
<213> synthetic construct

<400> 1057
aattttcgct ttaggtgcag ct 22

<210> 1058
<211> 25
<212> DNA
<213> synthetic construct

<400> 1058
gctgactatg aaggtaaagc tgaca 25

<210> 1059
<211> 24
<212> DNA
<213> synthetic construct

<400> 1059
cagctaagtt ttcttttggt tgga 24

<210> 1060
<211> 25
<212> DNA
<213> synthetic construct

<400> 1060
caattggctt tcgattattg ttgta 25

<210> 1061
<211> 30
<212> DNA
<213> synthetic construct

<400> 1061
aaccaatgat ctagtgtaaa tgttaaacct 30

<210> 1062
<211> 20
<212> DNA

<213> synthetic construct

<400> 1062
cttagatgtc ccatgctgat 20

<210> 1063
<211> 20
<212> DNA
<213> synthetic construct

<400> 1063
gtcaaacgag tgctaatggt 20

<210> 1064
<211> 18
<212> DNA
<213> synthetic construct

<400> 1064
ttcaataggc gtggtgtc 18

<210> 1065
<211> 20
<212> DNA
<213> synthetic construct

<400> 1065
ttatctgtcg gtttctctgg 20

<210> 1066
<211> 20
<212> DNA
<213> synthetic construct

<400> 1066
aggctcgtat gattgaaaaa 20

<210> 1067
<211> 21
<212> DNA
<213> synthetic construct

<400> 1067
ggttttgagc acgatatgta g 21

<210> 1068
<211> 20
<212> DNA
<213> synthetic construct

<400> 1068
ttggcacaac tgataagaca 20

<210> 1069
<211> 20
<212> DNA
<213> synthetic construct

<400> 1069
aaaaatcgtt caaagtgctc 20

<210> 1070
<211> 20
<212> DNA
<213> synthetic construct

<400> 1070
atcatcagcg acaatgagag 20

<210> 1071
<211> 26
<212> DNA
<213> synthetic construct

<400> 1071
tttttaacat ctcgaactat atctaa 26

<210> 1072
<211> 19
<212> DNA
<213> synthetic construct

<400> 1072
gtgccaattg caggatatg 19

<210> 1073
<211> 24
<212> DNA
<213> synthetic construct

<400> 1073
taatgttgtt catttaagcg tttt 24

<210> 1074
<211> 22
<212> DNA
<213> synthetic construct

<400> 1074
ttgataacat tgctgtgata gg 22

<210> 1075
<211> 22
<212> DNA
<213> synthetic construct

<400> 1075
ttcaattagt gattcgagtg tt 22

<210> 1076
<211> 21
<212> DNA
<213> synthetic construct

<400> 1076
tcttccattc tctcagtcaa a 21

<210> 1077
<211> 20
<212> DNA
<213> synthetic construct

<400> 1077
agaccatgta tgtaggtggc 20

<210> 1078
<211> 18
<212> DNA
<213> synthetic construct

<400> 1078
agggcaaatg ctttcagt 18

<210> 1079
<211> 23
<212> DNA
<213> synthetic construct

<400> 1079
aaaaggattg tttctctttt tct 23

<210> 1080
<211> 19
<212> DNA
<213> synthetic construct

<400> 1080
gtgccagagt tgagattcc 19

<210> 1081
<211> 18
<212> DNA
<213> synthetic construct

<400> 1081
atttgtcggt cgagtttg 18

<210> 1082
<211> 21
<212> DNA
<213> synthetic construct

<400> 1082
tgcatcttcc attttaatag c 21

<210> 1083
<211> 20
<212> DNA
<213> synthetic construct

<400> 1083
gtcattgtcc tttgttggtt 20

<210> 1084
<211> 20
<212> DNA
<213> synthetic construct

<400> 1084
ttgacagctt tgcattttta 20

<210> 1085
<211> 20
<212> DNA
<213> synthetic construct

<400> 1085
ggctttgttg cttttaatga 20

<210> 1086
<211> 20
<212> DNA
<213> synthetic construct

<400> 1086
gtattattgc ttggggtgat 20

<210> 1087
<211> 20

<212> DNA
<213> synthetic construct

<400> 1087
ggatatttct ttcgtgctgt 20

<210> 1088
<211> 20
<212> DNA
<213> synthetic construct

<400> 1088
tggctatcag taatgtttcg 20

<210> 1089
<211> 18
<212> DNA
<213> synthetic construct

<400> 1089
gaatcagcgt tgtcttcg 18

<210> 1090
<211> 19
<212> DNA
<213> synthetic construct

<400> 1090
atggtcaagc tgctgaagt 19

<210> 1091
<211> 27
<212> DNA
<213> synthetic construct

<400> 1091
atcatcttct ttaagtgtaa taagttt 27

<210> 1092
<211> 20
<212> DNA
<213> synthetic construct

<400> 1092
tggaagacat cgtaaacgta 20

<210> 1093
<211> 20
<212> DNA
<213> synthetic construct

<400> 1093
tggatcaaag aaacgtgaat 20

<210> 1094
<211> 18
<212> DNA
<213> synthetic construct

<400> 1094
ggcagttgta ctcccaca 18

<210> 1095
<211> 19
<212> DNA
<213> synthetic construct

<400> 1095
ctttcaacac cccaagttc 19

<210> 1096
<211> 24
<212> DNA
<213> synthetic construct

<400> 1096
tgaatagaaa tactaggacc acaa 24

<210> 1097
<211> 24
<212> DNA
<213> synthetic construct

<400> 1097
ttaagtttaa tccatctgaa aaat 24

<210> 1098
<211> 25
<212> DNA
<213> synthetic construct

<400> 1098
ggtgtattag ataatgaagg tatgg 25

<210> 1099
<211> 20
<212> DNA
<213> synthetic construct

<400> 1099

tctttatttt tggcaggttg 20

<210> 1100
<211> 18
<212> DNA
<213> synthetic construct

<400> 1100
aaccaaaagg cgagagtt 18

<210> 1101
<211> 23
<212> DNA
<213> synthetic construct

<400> 1101
gctgtcaaca taataaatgc ttc 23

<210> 1102
<211> 19
<212> DNA
<213> synthetic construct

<400> 1102
gcgaaagagt cgaaatcag 19

<210> 1103
<211> 20
<212> DNA
<213> synthetic construct

<400> 1103
aaggtgaacg ctctaattca 20

<210> 1104
<211> 20
<212> DNA
<213> synthetic construct

<400> 1104
ccgttacgtt gttcttcagt 20

<210> 1105
<211> 20
<212> DNA
<213> synthetic construct

<400> 1105
gcaatggttt cattcaaagt 20

<210> 1106
<211> 25
<212> DNA
<213> synthetic construct

<400> 1106
tgatattgga agatattagc ataga 25

<210> 1107
<211> 21
<212> DNA
<213> synthetic construct

<400> 1107
tgacaatcgc tttattcatt t 21

<210> 1108
<211> 21
<212> DNA
<213> synthetic construct

<400> 1108
ttttgattta tcttctgacg g 21

<210> 1109
<211> 20
<212> DNA
<213> synthetic construct

<400> 1109
cattcatttt attcccacct 20

<210> 1110
<211> 24
<212> DNA
<213> synthetic construct

<400> 1110
tggatataac aatcaaaatc actc 24

<210> 1111
<211> 21
<212> DNA
<213> synthetic construct

<400> 1111
ttttagaaat gattcgacag c 21

<210> 1112

<211> 27
<212> DNA
<213> synthetic construct

<400> 1112
atgagatacc taacatcagg agaatca 27

<210> 1113
<211> 29
<212> DNA
<213> synthetic construct

<400> 1113
gctattcttc catctaattt acgatcata 29

<210> 1114
<211> 19
<212> DNA
<213> synthetic construct

<400> 1114
accttcaata ttcgcatcc 19

<210> 1115
<211> 21
<212> DNA
<213> synthetic construct

<400> 1115
tattccgatt attaggcgta g 21

<210> 1116
<211> 20
<212> DNA
<213> synthetic construct

<400> 1116
tcgaggaatt aacaaaggtc 20

<210> 1117
<211> 20
<212> DNA
<213> synthetic construct

<400> 1117
atcaggttta gttggtggtg 20

<210> 1118
<211> 20
<212> DNA

<213> synthetic construct

<400> 1118
gaacctagcc atcaagacag 20

<210> 1119
<211> 20
<212> DNA
<213> synthetic construct

<400> 1119
gcattattag aggcatgtgg 20

<210> 1120
<211> 20
<212> DNA
<213> synthetic construct

<400> 1120
tcgtgcatta gtaccatcag 20

<210> 1121
<211> 19
<212> DNA
<213> synthetic construct

<400> 1121
aaccaccttc gtcacctac 19

<210> 1122
<211> 18
<212> DNA
<213> synthetic construct

<400> 1122
cgccaaaata gtgcttca 18

<210> 1123
<211> 20
<212> DNA
<213> synthetic construct

<400> 1123
ggtttgtcct catcacctaa 20

<210> 1124
<211> 25
<212> DNA
<213> synthetic construct

<400> 1124
tgaaaaataa attgatagca aaatc 25

<210> 1125
<211> 20
<212> DNA
<213> synthetic construct

<400> 1125
ttcgctcttg taagaccatt 20

<210> 1126
<211> 20
<212> DNA
<213> synthetic construct

<400> 1126
aatcctcata acgcagaaag 20

<210> 1127
<211> 20
<212> DNA
<213> synthetic construct

<400> 1127
tcagctaaat cgtctgaacc 20

<210> 1128
<211> 20
<212> DNA
<213> synthetic construct

<400> 1128
gctggtgtgg tacttatcct 20

<210> 1129
<211> 19
<212> DNA
<213> synthetic construct

<400> 1129
acgcctgtct tttcattgt 19

<210> 1130
<211> 27
<212> DNA
<213> synthetic construct

<400> 1130
ttaacaatag aacatttaac aaagaag 27

<210> 1131
<211> 23
<212> DNA
<213> synthetic construct

<400> 1131
ctcgaaatta agaaagtaac acc 23

<210> 1132
<211> 20
<212> DNA
<213> synthetic construct

<400> 1132
aaatggttca gtcgtaatgg 20

<210> 1133
<211> 20
<212> DNA
<213> synthetic construct

<400> 1133
agttgctctg gatgtcctac 20

<210> 1134
<211> 23
<212> DNA
<213> synthetic construct

<400> 1134
ggtattgcat ctgtaacttt agg 23

<210> 1135
<211> 20
<212> DNA
<213> synthetic construct

<400> 1135
aggttagcac tttgacttgg 20

<210> 1136
<211> 27
<212> DNA
<213> synthetic construct

<400> 1136
gttatcaatt aatacaaccc ctgaagc 27

<210> 1137
<211> 26
<212> DNA
<213> synthetic construct

<400> 1137
tggaactaat tctccttcga ttgtta 26

<210> 1138
<211> 26
<212> DNA
<213> synthetic construct

<400> 1138
gtagttgaaa atatgcctgt tggtgt 26

<210> 1139
<211> 26
<212> DNA
<213> synthetic construct

<400> 1139
attacaccat taacgataat tggcat 26

<210> 1140
<211> 30
<212> DNA
<213> synthetic construct

<400> 1140
agacttatta tctaaacgtg gtgaactagc 30

<210> 1141
<211> 24
<212> DNA
<213> synthetic construct

<400> 1141
caaatgattt attgccgtct ccta 24

<210> 1142
<211> 21
<212> DNA
<213> synthetic construct

<400> 1142
aaaattgctg gtatcgctgc a 21

<210> 1143
<211> 27

<212> DNA
<213> synthetic construct

<400> 1143
gtcattacat catcaacttg catgtta 27

<210> 1144
<211> 23
<212> DNA
<213> synthetic construct

<400> 1144
agctgagacg acacaagatc aaa 23

<210> 1145
<211> 23
<212> DNA
<213> synthetic construct

<400> 1145
ttatattgcg tttcaagagc tgc 23

<210> 1146
<211> 19
<212> DNA
<213> synthetic construct

<400> 1146
cgggattctc tgcattatc 19

<210> 1147
<211> 19
<212> DNA
<213> synthetic construct

<400> 1147
gtccgctggt atttctttg 19

<210> 1148
<211> 20
<212> DNA
<213> synthetic construct

<400> 1148
ttaattgttc taccgctcca 20

<210> 1149
<211> 23
<212> DNA
<213> synthetic construct

<400> 1149
catttgtacc cattattgta acc 23

<210> 1150
<211> 21
<212> DNA
<213> synthetic construct

<400> 1150
aaagataatt ggtttgctga a 21

<210> 1151
<211> 21
<212> DNA
<213> synthetic construct

<400> 1151
tcaaatcgct tcttaatcac t 21

<210> 1152
<211> 25
<212> DNA
<213> synthetic construct

<400> 1152
caagggtact taaacaaata gaaac 25

<210> 1153
<211> 21
<212> DNA
<213> synthetic construct

<400> 1153
ctcgaattat gaatgaagga g 21

<210> 1154
<211> 20
<212> DNA
<213> synthetic construct

<400> 1154
actttgtgca attatcagca 20

<210> 1155
<211> 25
<212> DNA
<213> synthetic construct

<400> 1155

atgaaacaga aaatatgaaa aatac 25

<210> 1156
<211> 24
<212> DNA
<213> synthetic construct

<400> 1156
ttatggatag cgtaaagaca ataa 24

<210> 1157
<211> 23
<212> DNA
<213> synthetic construct

<400> 1157
ttcactggta ataaaacaaa caa 23

<210> 1158
<211> 20
<212> DNA
<213> synthetic construct

<400> 1158
gattcttggc gctactaaca 20

<210> 1159
<211> 22
<212> DNA
<213> synthetic construct

<400> 1159
ccatcggtta cattactttc tc 22

<210> 1160
<211> 21
<212> DNA
<213> synthetic construct

<400> 1160
taatgtttcc ttgccttatg t 21

<210> 1161
<211> 22
<212> DNA
<213> synthetic construct

<400> 1161
tgataacttc ttctttcacc aa 22

<210> 1162
<211> 24
<212> DNA
<213> synthetic construct

<400> 1162
gtaaaaacat ttatgaaatc gaaa 24

<210> 1163
<211> 20
<212> DNA
<213> synthetic construct

<400> 1163
tgtatgttcc cccaattcta 20

<210> 1164
<211> 22
<212> DNA
<213> synthetic construct

<400> 1164
aagatacgat ttgttgattg tg 22

<210> 1165
<211> 19
<212> DNA
<213> synthetic construct

<400> 1165
ggccatacca taaataccc 19

<210> 1166
<211> 30
<212> DNA
<213> synthetic construct

<400> 1166
ttttatctta attaaggaag gagtgatttc 30

<210> 1167
<211> 27
<212> DNA
<213> synthetic construct

<400> 1167
tagtgaattt gttcactgtg tcgataa 27

<210> 1168

<211> 21
<212> DNA
<213> synthetic construct

<400> 1168
aaacatcaaa tcgctgtggc t 21

<210> 1169
<211> 21
<212> DNA
<213> synthetic construct

<400> 1169
gtgaaagatg cccttgagtg g 21

<210> 1170
<211> 25
<212> DNA
<213> synthetic construct

<400> 1170
gggttcttgc tgtctttaag tgatt 25

<210> 1171
<211> 25
<212> DNA
<213> synthetic construct

<400> 1171
tatatctcga agttgctagt tgggg 25

<210> 1172
<211> 25
<212> DNA
<213> synthetic construct

<400> 1172
aaagatagtt ctaagataaa tggtc 25

<210> 1173
<211> 19
<212> DNA
<213> synthetic construct

<400> 1173
ggccattatt ggtctgttg 19

<210> 1174
<211> 22
<212> DNA

<213> synthetic construct

<400> 1174
gctagtgcat ttgttattca ag 22

<210> 1175
<211> 19
<212> DNA
<213> synthetic construct

<400> 1175
ttcacttctg tgcatttgg 19

<210> 1176
<211> 20
<212> DNA
<213> synthetic construct

<400> 1176
ttttagcagc gtcaattttt 20

<210> 1177
<211> 21
<212> DNA
<213> synthetic construct

<400> 1177
ctgatccaga gtttcctacc t 21

<210> 1178
<211> 24
<212> DNA
<213> synthetic construct

<400> 1178
agaaagaaag tgatttctat gatt 24

<210> 1179
<211> 21
<212> DNA
<213> synthetic construct

<400> 1179
tggccatatc attcttttaa t 21

<210> 1180
<211> 18
<212> DNA
<213> synthetic construct

<400> 1180
tcgttacacc gaatggtc 18

<210> 1181
<211> 24
<212> DNA
<213> synthetic construct

<400> 1181
aggtgtgatg cttttaattt ttac 24

<210> 1182
<211> 23
<212> DNA
<213> synthetic construct

<400> 1182
tttaagcgta ctatcacaca gac 23

<210> 1183
<211> 25
<212> DNA
<213> synthetic construct

<400> 1183
tattgttttc agtttctttt gtatc 25

<210> 1184
<211> 22
<212> DNA
<213> synthetic construct

<400> 1184
ttgatagcga tttatttgta gg 22

<210> 1185
<211> 21
<212> DNA
<213> synthetic construct

<400> 1185
caattctgtc ctttcacttt g 21

<210> 1186
<211> 22
<212> DNA
<213> synthetic construct

<400> 1186
gtcagctcag taacaacaac ac 22

<210> 1187
<211> 20
<212> DNA
<213> synthetic construct

<400> 1187
gtagcgaagt ctggtgaaaa 20

<210> 1188
<211> 21
<212> DNA
<213> synthetic construct

<400> 1188
tgttatcgac cgttttgtat c 21

<210> 1189
<211> 21
<212> DNA
<213> synthetic construct

<400> 1189
tttcatcttt ggggatattt t 21

<210> 1190
<211> 20
<212> DNA
<213> synthetic construct

<400> 1190
ggtgtcctat ctcgaaaaca 20

<210> 1191
<211> 25
<212> DNA
<213> synthetic construct

<400> 1191
tttttcctta gattgagtat ctatt 25

<210> 1192
<211> 24
<212> DNA
<213> synthetic construct

<400> 1192
ataaagaaag gaaatgattt tatg 24

<210> 1193
<211> 24
<212> DNA
<213> synthetic construct

<400> 1193
tatctttaac aaaatcaaac tgaa 24

<210> 1194
<211> 22
<212> DNA
<213> synthetic construct

<400> 1194
atcattaggt aaaatgtctg ga 22

<210> 1195
<211> 25
<212> DNA
<213> synthetic construct

<400> 1195
aattatgtcc tttcacttta atttc 25

<210> 1196
<211> 21
<212> DNA
<213> synthetic construct

<400> 1196
aagttgctca aatacaagct g 21

<210> 1197
<211> 20
<212> DNA
<213> synthetic construct

<400> 1197
tgatgttagc ccaatctaca 20

<210> 1198
<211> 25
<212> DNA
<213> synthetic construct

<400> 1198
tgttattatt ctcattttct tcaat 25

<210> 1199
<211> 20

<212> DNA
<213> synthetic construct

<400> 1199
atgctctgat aaatctggga 20

<210> 1200
<211> 20
<212> DNA
<213> synthetic construct

<400> 1200
ttttattcat tgccctaacg 20

<210> 1201
<211> 26
<212> DNA
<213> synthetic construct

<400> 1201
ttttcagagt taatcgtttt attatc 26

<210> 1202
<211> 20
<212> DNA
<213> synthetic construct

<400> 1202
cgtagatgtg tttggagcta 20

<210> 1203
<211> 20
<212> DNA
<213> synthetic construct

<400> 1203
cttgagcagt cacctttttc 20

<210> 1204
<211> 20
<212> DNA
<213> synthetic construct

<400> 1204
aatttttggc acatgattta 20

<210> 1205
<211> 24
<212> DNA
<213> synthetic construct

<400> 1205
cttttatgtc tagttcttga gctg 24

<210> 1206
<211> 19
<212> DNA
<213> synthetic construct

<400> 1206
ccacctgttg aaggaagag 19

<210> 1207
<211> 23
<212> DNA
<213> synthetic construct

<400> 1207
tttaggaaat aagtcaaacc aaa 23

<210> 1208
<211> 24
<212> DNA
<213> synthetic construct

<400> 1208
gaagatttac acgataaaag tgag 24

<210> 1209
<211> 24
<212> DNA
<213> synthetic construct

<400> 1209
aaatcataaa tgtcgaatga gtaa 24

<210> 1210
<211> 20
<212> DNA
<213> synthetic construct

<400> 1210
agtcttatct aacggcgatg 20

<210> 1211
<211> 22
<212> DNA
<213> synthetic construct

<400> 1211

agttgtaact gtttgatgct tg 22

<210> 1212
<211> 27
<212> DNA
<213> synthetic construct

<400> 1212
ggatataaat acggaaataa agttaca 27

<210> 1213
<211> 23
<212> DNA
<213> synthetic construct

<400> 1213
gaagtcacag aagtagtgtg ttg 23

<210> 1214
<211> 21
<212> DNA
<213> synthetic construct

<400> 1214
atgaaattta aagcgatagc a 21

<210> 1215
<211> 27
<212> DNA
<213> synthetic construct

<400> 1215
gtataaacta ctttgtggtt cttcttt 27

<210> 1216
<211> 25
<212> DNA
<213> synthetic construct

<400> 1216
gtattgaata taaaaatgtg acagg 25

<210> 1217
<211> 20
<212> DNA
<213> synthetic construct

<400> 1217
gacattgata acatcggaca 20

<210> 1218
<211> 19
<212> DNA
<213> synthetic construct

<400> 1218
gcgcaattac agtaacgac 19

<210> 1219
<211> 19
<212> DNA
<213> synthetic construct

<400> 1219
tagattgcat tggttgtgg 19

<210> 1220
<211> 26
<212> DNA
<213> synthetic construct

<400> 1220
tttaaaagtt agttctttat tcgttg 26

<210> 1221
<211> 25
<212> DNA
<213> synthetic construct

<400> 1221
acttgaatat aagttacggg tgcat 25

<210> 1222
<211> 20
<212> DNA
<213> synthetic construct

<400> 1222
tttttatcgt aagccctttg 20

<210> 1223
<211> 20
<212> DNA
<213> synthetic construct

<400> 1223
caataaccac ccgttttatc 20

<210> 1224

<211> 25
<212> DNA
<213> synthetic construct

<400> 1224
gaaagtattc tgtaggtact gcttc 25

<210> 1225
<211> 20
<212> DNA
<213> synthetic construct

<400> 1225
cctttatcaa tcgcaatgtc 20

<210> 1226
<211> 20
<212> DNA
<213> synthetic construct

<400> 1226
cgggcaaata aataaagatg 20

<210> 1227
<211> 20
<212> DNA
<213> synthetic construct

<400> 1227
aactgaagat aagccgtttg 20

<210> 1228
<211> 19
<212> DNA
<213> synthetic construct

<400> 1228
aaagttggcg atggtaaag 19

<210> 1229
<211> 21
<212> DNA
<213> synthetic construct

<400> 1229
cgatgaagtt tgaatatcct g 21

<210> 1230
<211> 20
<212> DNA

<213> synthetic construct

<400> 1230
gtttgggact tattgctctg 20

<210> 1231
<211> 19
<212> DNA
<213> synthetic construct

<400> 1231
catcagccac agtttcaag 19

<210> 1232
<211> 19
<212> DNA
<213> synthetic construct

<400> 1232
agcctggtga cgacttatc 19

<210> 1233
<211> 18
<212> DNA
<213> synthetic construct

<400> 1233
atccgccagt tgcttaac 18

<210> 1234
<211> 19
<212> DNA
<213> synthetic construct

<400> 1234
accacgacag gtctttatg 19

<210> 1235
<211> 19
<212> DNA
<213> synthetic construct

<400> 1235
agagaggcac cgtcactac 19

<210> 1236
<211> 18
<212> DNA
<213> synthetic construct

<400> 1236
atggaattgc gtctgttc 18

<210> 1237
<211> 18
<212> DNA
<213> synthetic construct

<400> 1237
aagtttagcc acagcagg 18

<210> 1238
<211> 20
<212> DNA
<213> synthetic construct

<400> 1238
ataatcctcg tcatttgcag 20

<210> 1239
<211> 20
<212> DNA
<213> synthetic construct

<400> 1239
gacttcgggt gattgataag 20

<210> 1240
<211> 20
<212> DNA
<213> synthetic construct

<400> 1240
ctctgtccct cagttctacg 20

<210> 1241
<211> 20
<212> DNA
<213> synthetic construct

<400> 1241
tggtattggt tccgttattc 20

<210> 1242
<211> 18
<212> DNA
<213> synthetic construct

<400> 1242
gactcggtac agcgattg 18

<210> 1243
<211> 18
<212> DNA
<213> synthetic construct

<400> 1243
ctgacgttgg gtatctcg 18

<210> 1244
<211> 18
<212> DNA
<213> synthetic construct

<400> 1244
ctttacgacg gttctccc 18

<210> 1245
<211> 19
<212> DNA
<213> synthetic construct

<400> 1245
aatcttccct gctgaaatg 19

<210> 1246
<211> 19
<212> DNA
<213> synthetic construct

<400> 1246
ttgaaacttc ttactgccg 19

<210> 1247
<211> 21
<212> DNA
<213> synthetic construct

<400> 1247
aatttctaat gcagcgtatt g 21

<210> 1248
<211> 20
<212> DNA
<213> synthetic construct

<400> 1248
atagcagggc tgtttgtatc 20

<210> 1249
<211> 20
<212> DNA
<213> synthetic construct

<400> 1249
gacacggaaa ccaaattaac 20

<210> 1250
<211> 18
<212> DNA
<213> synthetic construct

<400> 1250
tattgtcatc gcgcagag 18

<210> 1251
<211> 20
<212> DNA
<213> synthetic construct

<400> 1251
tgttgggttg aaagagtagc 20

<210> 1252
<211> 20
<212> DNA
<213> synthetic construct

<400> 1252
gaataccaaa gcagatcgtc 20

<210> 1253
<211> 18
<212> DNA
<213> synthetic construct

<400> 1253
ccgagatcga caacagag 18

<210> 1254
<211> 20
<212> DNA
<213> synthetic construct

<400> 1254
ctaactcatt gtggtggagc 20

<210> 1255
<211> 19

<212> DNA
<213> synthetic construct

<400> 1255
cttgtcatcg gtcatgttg 19

<210> 1256
<211> 21
<212> DNA
<213> synthetic construct

<400> 1256
ggcgttacta tcctctctat g 21

<210> 1257
<211> 18
<212> DNA
<213> synthetic construct

<400> 1257
tttccatact gattgccg 18

<210> 1258
<211> 24
<212> DNA
<213> synthetic construct

<400> 1258
tttgttgtta ttggtacttc attc 24

<210> 1259
<211> 19
<212> DNA
<213> synthetic construct

<400> 1259
atcgaaattg ttactggcg 19

<210> 1260
<211> 21
<212> DNA
<213> synthetic construct

<400> 1260
ttacgcttcc gatcatagta g 21

<210> 1261
<211> 20
<212> DNA
<213> synthetic construct

<400> 1261
gaatacgttt agttgaggcg 20

<210> 1262
<211> 20
<212> DNA
<213> synthetic construct

<400> 1262
aagtgaagag gtaatggctg 20

<210> 1263
<211> 19
<212> DNA
<213> synthetic construct

<400> 1263
taccatcagt atccttggc 19

<210> 1264
<211> 20
<212> DNA
<213> synthetic construct

<400> 1264
gatggtgact ctattgcagg 20

<210> 1265
<211> 19
<212> DNA
<213> synthetic construct

<400> 1265
ccatacgatt ctggacctc 19

<210> 1266
<211> 20
<212> DNA
<213> synthetic construct

<400> 1266
tgtttgaggt cactttctgg 20

<210> 1267
<211> 18
<212> DNA
<213> synthetic construct

<400> 1267

caatagcttt caccaggg 18

<210> 1268
<211> 19
<212> DNA
<213> synthetic construct

<400> 1268
tgtttctgca ctcgaaatg 19

<210> 1269
<211> 18
<212> DNA
<213> synthetic construct

<400> 1269
ggcaatagct ttcaccag 18

<210> 1270
<211> 20
<212> DNA
<213> synthetic construct

<400> 1270
tatgctgctc caactattcc 20

<210> 1271
<211> 20
<212> DNA
<213> synthetic construct

<400> 1271
attatctcca tctttcaggg 20

<210> 1272
<211> 20
<212> DNA
<213> synthetic construct

<400> 1272
cttggaaatg ttggtaaagc 20

<210> 1273
<211> 19
<212> DNA
<213> synthetic construct

<400> 1273
taaactcctt cggttgagc 19

<210> 1274
<211> 21
<212> DNA
<213> synthetic construct

<400> 1274
tcaatgctga aactataagg c 21

<210> 1275
<211> 19
<212> DNA
<213> synthetic construct

<400> 1275
acttagcacc cagttcgac 19

<210> 1276
<211> 20
<212> DNA
<213> synthetic construct

<400> 1276
catcaggcag ttatcctgtc 20

<210> 1277
<211> 19
<212> DNA
<213> synthetic construct

<400> 1277
agtcgtcctc ctgcattac 19

<210> 1278
<211> 18
<212> DNA
<213> synthetic construct

<400> 1278
ttcacagcgg atatggac 18

<210> 1279
<211> 20
<212> DNA
<213> synthetic construct

<400> 1279
cactttgctc ccagaaatac 20

<210> 1280

<211> 19
<212> DNA
<213> synthetic construct

<400> 1280
agactgggat ttggtcaac 19

<210> 1281
<211> 18
<212> DNA
<213> synthetic construct

<400> 1281
agacaccatc ctgccttc 18

<210> 1282
<211> 20
<212> DNA
<213> synthetic construct

<400> 1282
ggagtatatt gcgtgggtag 20

<210> 1283
<211> 19
<212> DNA
<213> synthetic construct

<400> 1283
aagattcacc atagaggcg 19

<210> 1284
<211> 21
<212> DNA
<213> synthetic construct

<400> 1284
aaatgaatgt ctggactcaa c 21

<210> 1285
<211> 22
<212> DNA
<213> synthetic construct

<400> 1285
tgtaaacaac ggtcataaag tg 22

<210> 1286
<211> 18
<212> DNA

<213> synthetic construct

<400> 1286
agcagcatca ggttcttg 18

<210> 1287
<211> 18
<212> DNA
<213> synthetic construct

<400> 1287
cagttgttca aacgcgag 18

<210> 1288
<211> 20
<212> DNA
<213> synthetic construct

<400> 1288
ttcttcggta tcctattccc 20

<210> 1289
<211> 19
<212> DNA
<213> synthetic construct

<400> 1289
tgtgaggtcc acttcttcc 19

<210> 1290
<211> 20
<212> DNA
<213> synthetic construct

<400> 1290
aaatggcgac aaattatacc 20

<210> 1291
<211> 20
<212> DNA
<213> synthetic construct

<400> 1291
ctgggtctcc tcattacaag 20

<210> 1292
<211> 19
<212> DNA
<213> synthetic construct

<400> 1292
aagaagatgt ttatggcgg 19

<210> 1293
<211> 21
<212> DNA
<213> synthetic construct

<400> 1293
gattcacagg tactggattt g 21

<210> 1294
<211> 25
<212> DNA
<213> synthetic construct

<400> 1294
ccactttttc tacttctaaa acttc 25

<210> 1295
<211> 22
<212> DNA
<213> synthetic construct

<400> 1295
tattttcaaa gatgcaaaca ca 22

<210> 1296
<211> 21
<212> DNA
<213> synthetic construct

<400> 1296
ttgataacaa acaaattctg c 21

<210> 1297
<211> 24
<212> DNA
<213> synthetic construct

<400> 1297
aacgtttaaa tcttatctta actg 24

<210> 1298
<211> 19
<212> DNA
<213> synthetic construct

<400> 1298
taacactgaa ccccaatga 19

<210> 1299
<211> 20
<212> DNA
<213> synthetic construct

<400> 1299
atccggtttt tatggtatga 20

<210> 1300
<211> 20
<212> DNA
<213> synthetic construct

<400> 1300
cctcaaacaa gcagaaaaag 20

<210> 1301
<211> 19
<212> DNA
<213> synthetic construct

<400> 1301
actaaatggg gtgaattgc 19

<210> 1302
<211> 21
<212> DNA
<213> synthetic construct

<400> 1302
cttagggaaa aagatgggta g 21

<210> 1303
<211> 27
<212> DNA
<213> synthetic construct

<400> 1303
cgtaaaaata acttagatca catacag 27

<210> 1304
<211> 19
<212> DNA
<213> synthetic construct

<400> 1304
cctcgcatat cagtttgtg 19

<210> 1305
<211> 25
<212> DNA
<213> synthetic construct

<400> 1305
gatgatatta atctatttcc gtttg 25

<210> 1306
<211> 20
<212> DNA
<213> synthetic construct

<400> 1306
atgaagcaca accaccatac 20

<210> 1307
<211> 26
<212> DNA
<213> synthetic construct

<400> 1307
gtattattta cggtctattt agcaag 26

<210> 1308
<211> 20
<212> DNA
<213> synthetic construct

<400> 1308
ctaagcacaa gaaaggctca 20

<210> 1309
<211> 27
<212> DNA
<213> synthetic construct

<400> 1309
tcatcatcta tgaatttact actatcc 27

<210> 1310
<211> 20
<212> DNA
<213> synthetic construct

<400> 1310
acgacgaatg attcataagg 20

<210> 1311
<211> 21

<212> DNA
<213> synthetic construct

<400> 1311
ttctatcaat gctggattca c 21

<210> 1312
<211> 21
<212> DNA
<213> synthetic construct

<400> 1312
ttaaaccatt aggaaatcgt g 21

<210> 1313
<211> 25
<212> DNA
<213> synthetic construct

<400> 1313
aatagctaat atatcttctt cattt 25

<210> 1314
<211> 20
<212> DNA
<213> synthetic construct

<400> 1314
tcaagacacg ctttctagtg 20

<210> 1315
<211> 18
<212> DNA
<213> synthetic construct

<400> 1315
atcgaaccct ttgtttcc 18

<210> 1316
<211> 23
<212> DNA
<213> synthetic construct

<400> 1316
gttttcttat tacgaaccac att 23

<210> 1317
<211> 22
<212> DNA
<213> synthetic construct

<400> 1317
ctgaagtgta aacccatatt ga 22

<210> 1318
<211> 24
<212> DNA
<213> synthetic construct

<400> 1318
ttattctgct atatgatatt cacg 24

<210> 1319
<211> 23
<212> DNA
<213> synthetic construct

<400> 1319
aacattagta gatggattca agg 23

<210> 1320
<211> 21
<212> DNA
<213> synthetic construct

<400> 1320
acattaagtc agcatttgga g 21

<210> 1321
<211> 24
<212> DNA
<213> synthetic construct

<400> 1321
taactttaag acgactatcc atca 24

<210> 1322
<211> 23
<212> DNA
<213> synthetic construct

<400> 1322
attagagcca aagtactctc cac 23

<210> 1323
<211> 22
<212> DNA
<213> synthetic construct

<400> 1323

taacaaacca acctttcgat ac 22

<210> 1324
<211> 24
<212> DNA
<213> synthetic construct

<400> 1324
tttgatacct gtaatttgtt cttg 24

<210> 1325
<211> 21
<212> DNA
<213> synthetic construct

<400> 1325
caccaattga tccaatgtta t 21

<210> 1326
<211> 20
<212> DNA
<213> synthetic construct

<400> 1326
agcttctcgc actacttgac 20

<210> 1327
<211> 20
<212> DNA
<213> synthetic construct

<400> 1327
gaatgaggca gctatcaaac 20

<210> 1328
<211> 24
<212> DNA
<213> synthetic construct

<400> 1328
aaagaaatta agtctctagc caaa 24

<210> 1329
<211> 22
<212> DNA
<213> synthetic construct

<400> 1329
ttattgtgcg taaggataat tg 22

<210> 1330
<211> 20
<212> DNA
<213> synthetic construct

<400> 1330
aaccaaacga tgctagatga 20

<210> 1331
<211> 24
<212> DNA
<213> synthetic construct

<400> 1331
aagaatactt taccaaaagg tgag 24

<210> 1332
<211> 24
<212> DNA
<213> synthetic construct

<400> 1332
agttttataa tattcagtgc aaaa 24

<210> 1333
<211> 24
<212> DNA
<213> synthetic construct

<400> 1333
tgaaagataa aatactaggt gtcg 24

<210> 1334
<211> 26
<212> DNA
<213> synthetic construct

<400> 1334
tttagagaga cagctagata atttga 26

<210> 1335
<211> 23
<212> DNA
<213> synthetic construct

<400> 1335
caatcttact aattgcttga cct 23

<210> 1336

<211> 21
<212> DNA
<213> synthetic construct

<400> 1336
tgaaagaagg gatagttttg c 21

<210> 1337
<211> 19
<212> DNA
<213> synthetic construct

<400> 1337
ttaaacgatt gggtgatgg 19

<210> 1338
<211> 21
<212> DNA
<213> synthetic construct

<400> 1338
atgcaaatta tggagatgaa g 21

<210> 1339
<211> 20
<212> DNA
<213> synthetic construct

<400> 1339
gacagcttga cctttaccag 20

<210> 1340
<211> 25
<212> DNA
<213> synthetic construct

<400> 1340
tgattataga agaaattcaa ggaaa 25

<210> 1341
<211> 20
<212> DNA
<213> synthetic construct

<400> 1341
tcaatcatgt gaatgtccta 20

<210> 1342
<211> 23
<212> DNA

<213> synthetic construct

<400> 1342
ttaacttatt cagatgggat agc 23

<210> 1343
<211> 23
<212> DNA
<213> synthetic construct

<400> 1343
gaaataaaga ttcgaacatg aac 23

<210> 1344
<211> 22
<212> DNA
<213> synthetic construct

<400> 1344
tcgtatatgg aatttgtagc ag 22

<210> 1345
<211> 20
<212> DNA
<213> synthetic construct

<400> 1345
tgtcgatgat aaatcgtttg 20

<210> 1346
<211> 21
<212> DNA
<213> synthetic construct

<400> 1346
gcttaacaac gtaaaacaag c 21

<210> 1347
<211> 21
<212> DNA
<213> synthetic construct

<400> 1347
tctttctctt caacaatacg c 21

<210> 1348
<211> 20
<212> DNA
<213> synthetic construct

<400> 1348
agctcacggc tttaactatg 20

<210> 1349
<211> 20
<212> DNA
<213> synthetic construct

<400> 1349
tgtagaacgt ggaaatgttg 20

<210> 1350
<211> 21
<212> DNA
<213> synthetic construct

<400> 1350
gtatttacgt gcgtttattt g 21

<210> 1351
<211> 20
<212> DNA
<213> synthetic construct

<400> 1351
atgaattgat gaaaagtgtc 20

<210> 1352
<211> 18
<212> DNA
<213> synthetic construct

<400> 1352
ggtcaagccc agacagag 18

<210> 1353
<211> 24
<212> DNA
<213> synthetic construct

<400> 1353
atgtcacgac ctttcttata tttt 24

<210> 1354
<211> 25
<212> DNA
<213> synthetic construct

<400> 1354
catttaacag tgaatatact tggtc 25

<210> 1355
<211> 24
<212> DNA
<213> synthetic construct

<400> 1355
gaaatatatc gaaaaagtgt tgag 24

<210> 1356
<211> 23
<212> DNA
<213> synthetic construct

<400> 1356
atgtcaaaat tagcagaagc tat 23

<210> 1357
<211> 22
<212> DNA
<213> synthetic construct

<400> 1357
ttagaaaccg aagattttac ct 22

<210> 1358
<211> 21
<212> DNA
<213> synthetic construct

<400> 1358
tgacacaata cctcatgaac c 21

<210> 1359
<211> 23
<212> DNA
<213> synthetic construct

<400> 1359
tcctttctta taaccactac agg 23

<210> 1360
<211> 27
<212> DNA
<213> synthetic construct

<400> 1360
gtgacagatg taagacttag aaaaata 27

<210> 1361
<211> 19
<212> DNA
<213> synthetic construct

<400> 1361
agcttcgtct gattcttcg 19

<210> 1362
<211> 25
<212> DNA
<213> synthetic construct

<400> 1362
atgaaaataa tcaactcaga taagg 25

<210> 1363
<211> 26
<212> DNA
<213> synthetic construct

<400> 1363
tataattcct tcactttacc tatcaa 26

<210> 1364
<211> 19
<212> DNA
<213> synthetic construct

<400> 1364
atgaacatga gcgacatca 19

<210> 1365
<211> 22
<212> DNA
<213> synthetic construct

<400> 1365
atacgttctg caagatgttc ta 22

<210> 1366
<211> 18
<212> DNA
<213> synthetic construct

<400> 1366
ttgaattggg aacgacag 18

<210> 1367
<211> 20

<212> DNA
<213> synthetic construct

<400> 1367
actactattt gggcgaacac 20

<210> 1368
<211> 21
<212> DNA
<213> synthetic construct

<400> 1368
aatgacgatg aaacttcctt t 21

<210> 1369
<211> 19
<212> DNA
<213> synthetic construct

<400> 1369
acccatacgc ttgaaatct 19

<210> 1370
<211> 24
<212> DNA
<213> synthetic construct

<400> 1370
catcaattgt gtgataatga taag 24

<210> 1371
<211> 20
<212> DNA
<213> synthetic construct

<400> 1371
gctgtttgca attctttagc 20

<210> 1372
<211> 27
<212> DNA
<213> synthetic construct

<400> 1372
acgtatatcg tcctgaatat tttctaa 27

<210> 1373
<211> 20
<212> DNA
<213> synthetic construct

<400> 1373
ctacgctagt cgaaggctat 20

<210> 1374
<211> 20
<212> DNA
<213> synthetic construct

<400> 1374
aatcgtccac ttgtcttttg 20

<210> 1375
<211> 23
<212> DNA
<213> synthetic construct

<400> 1375
aatttcacta ggcgtataat cag 23

<210> 1376
<211> 21
<212> DNA
<213> synthetic construct

<400> 1376
ccaagatgct aatgtgtctt c 21

<210> 1377
<211> 20
<212> DNA
<213> synthetic construct

<400> 1377
tttgacctgg agttaaatgg 20

<210> 1378
<211> 20
<212> DNA
<213> synthetic construct

<400> 1378
tgcgaattaa acagttaggc 20

<210> 1379
<211> 18
<212> DNA
<213> synthetic construct

<400> 1379

ttttagttgc cgatggtg 18

<210> 1380
<211> 25
<212> DNA
<213> synthetic construct

<400> 1380
tttaatgttg ttatttgttg ctaaa 25

<210> 1381
<211> 24
<212> DNA
<213> synthetic construct

<400> 1381
aaatagagca tgatcaaaga taaa 24

<210> 1382
<211> 23
<212> DNA
<213> synthetic construct

<400> 1382
tatcaatctt tcaagcagtt atg 23

<210> 1383
<211> 25
<212> DNA
<213> synthetic construct

<400> 1383
aaataaaata tagcgatggt aaatg 25

<210> 1384
<211> 22
<212> DNA
<213> synthetic construct

<400> 1384
caaaggagtg tgattttatg tc 22

<210> 1385
<211> 20
<212> DNA
<213> synthetic construct

<400> 1385
tggattagct ttaggaccag 20

<210> 1386
<211> 20
<212> DNA
<213> synthetic construct

<400> 1386
gaagtggagc gtaatttgtc 20

<210> 1387
<211> 19
<212> DNA
<213> synthetic construct

<400> 1387
ctgcttgaac atcatctgg 19

<210> 1388
<211> 21
<212> DNA
<213> synthetic construct

<400> 1388
tgtcaggtat cgtagatgca a 21

<210> 1389
<211> 26
<212> DNA
<213> synthetic construct

<400> 1389
ggaataatcc aataataaag tctaca 26

<210> 1390
<211> 19
<212> DNA
<213> synthetic construct

<400> 1390
gaaataaccg cattccaac 19

<210> 1391
<211> 25
<212> DNA
<213> synthetic construct

<400> 1391
gatttgtata tttagtgttt cagca 25

<210> 1392

<211> 19
<212> DNA
<213> synthetic construct

<400> 1392
aagagaacca aaccaatcg 19

<210> 1393
<211> 20
<212> DNA
<213> synthetic construct

<400> 1393
ttctttcggc ttaaagtcat 20

<210> 1394
<211> 25
<212> DNA
<213> synthetic construct

<400> 1394
aaaagatatg acataatgtt acgaa 25

<210> 1395
<211> 23
<212> DNA
<213> synthetic construct

<400> 1395
atagtatatg tagctggcgg ttg 23

<210> 1396
<211> 21
<212> DNA
<213> synthetic construct

<400> 1396
catccaattt acagaaccat c 21

<210> 1397
<211> 22
<212> DNA
<213> synthetic construct

<400> 1397
cgtcatcaga agtagaagtg ag 22

<210> 1398
<211> 26
<212> DNA

<213> synthetic construct

<400> 1398
tgtatcaact ccactttatt catatt 26

<210> 1399
<211> 22
<212> DNA
<213> synthetic construct

<400> 1399
tttttcgtat cttatgggtc tt 22

<210> 1400
<211> 21
<212> DNA
<213> synthetic construct

<400> 1400
agcaagttct ttgttaattg c 21

<210> 1401
<211> 21
<212> DNA
<213> synthetic construct

<400> 1401
ttcgtttgat tgaacttgaa c 21

<210> 1402
<211> 25
<212> DNA
<213> synthetic construct

<400> 1402
tattgtcaaa gtcacaacaa ttaga 25

<210> 1403
<211> 20
<212> DNA
<213> synthetic construct

<400> 1403
acgttgtatc gcattgtaaa 20

<210> 1404
<211> 25
<212> DNA
<213> synthetic construct

<400> 1404
tcagatataa acaatttaac aagga 25

<210> 1405
<211> 20
<212> DNA
<213> synthetic construct

<400> 1405
gaaggtgcct gatctgtaat 20

<210> 1406
<211> 20
<212> DNA
<213> synthetic construct

<400> 1406
taatcaaacg caacaacaac 20

<210> 1407
<211> 19
<212> DNA
<213> synthetic construct

<400> 1407
catcgccatt atctgtagg 19

<210> 1408
<211> 20
<212> DNA
<213> synthetic construct

<400> 1408
aaacgcattg ttaagagacc 20

<210> 1409
<211> 20
<212> DNA
<213> synthetic construct

<400> 1409
acctctagca ccaatcaaag 20

<210> 1410
<211> 21
<212> DNA
<213> synthetic construct

<400> 1410
caggtaagtc aaagtctggt g 21

<210> 1411
<211> 20
<212> DNA
<213> synthetic construct

<400> 1411
attgccacct tgtatattgg 20

<210> 1412
<211> 24
<212> DNA
<213> synthetic construct

<400> 1412
gattaatgac atcaagggtt tagt 24

<210> 1413
<211> 19
<212> DNA
<213> synthetic construct

<400> 1413
gcaaagcttg cataacatc 19

<210> 1414
<211> 20
<212> DNA
<213> synthetic construct

<400> 1414
tctggtgaag gtttaggaag 20

<210> 1415
<211> 20
<212> DNA
<213> synthetic construct

<400> 1415
accacttgac tcgaacaaac 20

<210> 1416
<211> 20
<212> DNA
<213> synthetic construct

<400> 1416
caccaaactc aggcttattc 20

<210> 1417
<211> 19
<212> DNA
<213> synthetic construct

<400> 1417
agaccatacc cttgaccac 19

<210> 1418
<211> 21
<212> DNA
<213> synthetic construct

<400> 1418
gaatgcaaag aaacattgaa a 21

<210> 1419
<211> 19
<212> DNA
<213> synthetic construct

<400> 1419
ccgtatgcaa atcatcact 19

<210> 1420
<211> 20
<212> DNA
<213> synthetic construct

<400> 1420
tgtctgctgc tagtgaatcc 20

<210> 1421
<211> 20
<212> DNA
<213> synthetic construct

<400> 1421
aagcaatttg agctttagca 20

<210> 1422
<211> 19
<212> DNA
<213> synthetic construct

<400> 1422
tgacaggttc attggtgtc 19

<210> 1423
<211> 19

<212> DNA
<213> synthetic construct

<400> 1423
acagcctcaa attctccac 19

<210> 1424
<211> 20
<212> DNA
<213> synthetic construct

<400> 1424
tcagatggtg atgaactgtc 20

<210> 1425
<211> 20
<212> DNA
<213> synthetic construct

<400> 1425
gacttcttgt tgtggaggag 20

<210> 1426
<211> 20
<212> DNA
<213> synthetic construct

<400> 1426
aactagggct gctaatgttg 20

<210> 1427
<211> 19
<212> DNA
<213> synthetic construct

<400> 1427
ttgagcaaga gatcctgaa 19

<210> 1428
<211> 19
<212> DNA
<213> synthetic construct

<400> 1428
agtcagagca gggtcaatc 19

<210> 1429
<211> 20
<212> DNA
<213> synthetic construct

<400> 1429
atgtcgggta agacacaatc 20

<210> 1430
<211> 19
<212> DNA
<213> synthetic construct

<400> 1430
gtcaacaaca aggcaagac 19

<210> 1431
<211> 20
<212> DNA
<213> synthetic construct

<400> 1431
ctagccacga ctctttgaac 20

<210> 1432
<211> 20
<212> DNA
<213> synthetic construct

<400> 1432
ctgtcaagaa actgacgttg 20

<210> 1433
<211> 22
<212> DNA
<213> synthetic construct

<400> 1433
ttgttgtaga attggatgaa tg 22

<210> 1434
<211> 21
<212> DNA
<213> synthetic construct

<400> 1434
ttggctcgat taagaaataa a 21

<210> 1435
<211> 19
<212> DNA
<213> synthetic construct

<400> 1435

ctgaaacatc accagcaga 19

<210> 1436
<211> 20
<212> DNA
<213> synthetic construct

<400> 1436
gctccatcta gcaactcatc 20

<210> 1437
<211> 20
<212> DNA
<213> synthetic construct

<400> 1437
gagaccaaca aacacgaaac 20

<210> 1438
<211> 20
<212> DNA
<213> synthetic construct

<400> 1438
gacactccgt cagattcaac 20

<210> 1439
<211> 20
<212> DNA
<213> synthetic construct

<400> 1439
attcccgtca tcaacattag 20

<210> 1440
<211> 20
<212> DNA
<213> synthetic construct

<400> 1440
acatagtcag ccacaaccac 20

<210> 1441
<211> 20
<212> DNA
<213> synthetic construct

<400> 1441
gcactcgaat tgttatttcc 20

<210> 1442
<211> 21
<212> DNA
<213> synthetic construct

<400> 1442
tcaagaaagc tactgatggt g 21

<210> 1443
<211> 20
<212> DNA
<213> synthetic construct

<400> 1443
atttactggt gtccaagacg 20

<210> 1444
<211> 20
<212> DNA
<213> synthetic construct

<400> 1444
ctcagtcctt tgctacaacc 20

<210> 1445
<211> 20
<212> DNA
<213> synthetic construct

<400> 1445
aacggtatca gtttcaccag 20

<210> 1446
<211> 20
<212> DNA
<213> synthetic construct

<400> 1446
aacggtcata tccaaagaag 20

<210> 1447
<211> 20
<212> DNA
<213> synthetic construct

<400> 1447
acccatgaaa caaggtgtag 20

<210> 1448

<211> 20
<212> DNA
<213> synthetic construct

<400> 1448
aacattagaa acggaacagg 20

<210> 1449
<211> 20
<212> DNA
<213> synthetic construct

<400> 1449
ctcagttctg catttggttc 20

<210> 1450
<211> 20
<212> DNA
<213> synthetic construct

<400> 1450
caaagttcca ccatttcaac 20

<210> 1451
<211> 20
<212> DNA
<213> synthetic construct

<400> 1451
attgatccta atgcttccac 20

<210> 1452
<211> 20
<212> DNA
<213> synthetic construct

<400> 1452
atcgacatca acaggcttac 20

<210> 1453
<211> 20
<212> DNA
<213> synthetic construct

<400> 1453
tctttggagg atatggacac 20

<210> 1454
<211> 19
<212> DNA

<213> synthetic construct

<400> 1454
caatagcaca ggcacaatc 19

<210> 1455
<211> 20
<212> DNA
<213> synthetic construct

<400> 1455
aaatctcatc cctcttcacc 20

<210> 1456
<211> 20
<212> DNA
<213> synthetic construct

<400> 1456
ttcattcaaa ccagccttac 20

<210> 1457
<211> 21
<212> DNA
<213> synthetic construct

<400> 1457
ttcaccatac catcttacac c 21

<210> 1458
<211> 24
<212> DNA
<213> synthetic construct

<400> 1458
cacaaggtta tacattcaga aaac 24

<210> 1459
<211> 22
<212> DNA
<213> synthetic construct

<400> 1459
ctacatacca tttcaacacc ac 22

<210> 1460
<211> 21
<212> DNA
<213> synthetic construct

<400> 1460
aaaccataaa tcaacaacca c 21

<210> 1461
<211> 20
<212> DNA
<213> synthetic construct

<400> 1461
caccaacaca tctcattgtc 20

<210> 1462
<211> 19
<212> DNA
<213> synthetic construct

<400> 1462
tattatggcg attccacag 19

<210> 1463
<211> 18
<212> DNA
<213> synthetic construct

<400> 1463
cagcccaaat tcttgttc 18

<210> 1464
<211> 20
<212> DNA
<213> synthetic construct

<400> 1464
cgtttgttat ttgctgttcc 20

<210> 1465
<211> 20
<212> DNA
<213> synthetic construct

<400> 1465
gctgctttca tagtttcacc 20

<210> 1466
<211> 20
<212> DNA
<213> synthetic construct

<400> 1466
agctaaatcc aaagacgatg 20

<210> 1467
<211> 20
<212> DNA
<213> synthetic construct

<400> 1467
ccttgattat gcgagaaatg 20

<210> 1468
<211> 20
<212> DNA
<213> synthetic construct

<400> 1468
gctaccactc caaacacttc 20

<210> 1469
<211> 20
<212> DNA
<213> synthetic construct

<400> 1469
agacgacagc actagattcc 20

<210> 1470
<211> 20
<212> DNA
<213> synthetic construct

<400> 1470
ttggtgggtt agaagttgag 20

<210> 1471
<211> 20
<212> DNA
<213> synthetic construct

<400> 1471
ttgaaacagc atgaacaatc 20

<210> 1472
<211> 21
<212> DNA
<213> synthetic construct

<400> 1472
caagagaaag ggaaagaaga g 21

<210> 1473
<211> 20
<212> DNA
<213> synthetic construct

<400> 1473
aggtttcgtc gtatgaagtg 20

<210> 1474
<211> 27
<212> DNA
<213> synthetic construct

<400> 1474
cgttaactca gtcatatact acatttt 27

<210> 1475
<211> 20
<212> DNA
<213> synthetic construct

<400> 1475
gcaataaaag aaaccccaat 20

<210> 1476
<211> 20
<212> DNA
<213> synthetic construct

<400> 1476
gatccagatg ctgtaaccac 20

<210> 1477
<211> 20
<212> DNA
<213> synthetic construct

<400> 1477
catcgtaaat aacccgtttc 20

<210> 1478
<211> 20
<212> DNA
<213> synthetic construct

<400> 1478
taatttccct tgttgtttcc 20

<210> 1479
<211> 20

<212> DNA
<213> synthetic construct

<400> 1479
tcaatccaac catcttcttc 20

<210> 1480
<211> 20
<212> DNA
<213> synthetic construct

<400> 1480
acattcattg ggttcatctc 20

<210> 1481
<211> 20
<212> DNA
<213> synthetic construct

<400> 1481
attggtggta attgtgttcc 20

<210> 1482
<211> 20
<212> DNA
<213> synthetic construct

<400> 1482
tgtcccagaa agtgctaaac 20

<210> 1483
<211> 18
<212> DNA
<213> synthetic construct

<400> 1483
aataccaccg gaaactgg 18

<210> 1484
<211> 22
<212> DNA
<213> synthetic construct

<400> 1484
ttagctcatc aacatcatca ac 22

<210> 1485
<211> 21
<212> DNA
<213> synthetic construct

<400> 1485
gctttaattt gacttggagt g 21

<210> 1486
<211> 20
<212> DNA
<213> synthetic construct

<400> 1486
actgtcgttt ctggtcattc 20

<210> 1487
<211> 20
<212> DNA
<213> synthetic construct

<400> 1487
acgagtgaaa tctcttggtg 20

<210> 1488
<211> 20
<212> DNA
<213> synthetic construct

<400> 1488
ggtacgaaca gacaaacacc 20

<210> 1489
<211> 20
<212> DNA
<213> synthetic construct

<400> 1489
aacagctcta atggcaaatc 20

<210> 1490
<211> 20
<212> DNA
<213> synthetic construct

<400> 1490
ttagccaagt ttgaatcgtc 20

<210> 1491
<211> 20
<212> DNA
<213> synthetic construct

<400> 1491

aatttcttcg tcatcattgg 20

<210> 1492
<211> 20
<212> DNA
<213> synthetic construct

<400> 1492
tcaatcttgg ctgctacttc 20

<210> 1493
<211> 20
<212> DNA
<213> synthetic construct

<400> 1493
ggctaatgaa actctgatgg 20

<210> 1494
<211> 20
<212> DNA
<213> synthetic construct

<400> 1494
attgggtatc aacaccattc 20

<210> 1495
<211> 20
<212> DNA
<213> synthetic construct

<400> 1495
ccatagttgt ttggttcctg 20

<210> 1496
<211> 20
<212> DNA
<213> synthetic construct

<400> 1496
attagctgaa catgccagag 20

<210> 1497
<211> 18
<212> DNA
<213> synthetic construct

<400> 1497
atctccattg caccccttc 18

<210> 1498
<211> 19
<212> DNA
<213> synthetic construct

<400> 1498
gatttacacg cctcacaaa 19

<210> 1499
<211> 22
<212> DNA
<213> synthetic construct

<400> 1499
gcaataacag cagaaatatc aa 22

<210> 1500
<211> 20
<212> DNA
<213> synthetic construct

<400> 1500
taccacgata gctccatttc 20

<210> 1501
<211> 19
<212> DNA
<213> synthetic construct

<400> 1501
acccaaagtt ctcttgctg 19

<210> 1502
<211> 20
<212> DNA
<213> synthetic construct

<400> 1502
gtggtgttac tgttggtgaa 20

<210> 1503
<211> 20
<212> DNA
<213> synthetic construct

<400> 1503
gtagcatccc aagtcaaatc 20

<210> 1504

<211> 25
<212> DNA
<213> synthetic construct

<400> 1504
aagagatgat cctcatacta ttgaa 25

<210> 1505
<211> 22
<212> DNA
<213> synthetic construct

<400> 1505
caagacaaca catttcttct tc 22

<210> 1506
<211> 20
<212> DNA
<213> synthetic construct

<400> 1506
taagagagat ggccgtaaag 20

<210> 1507
<211> 19
<212> DNA
<213> synthetic construct

<400> 1507
ttaccgtgaa taccgacag 19

<210> 1508
<211> 19
<212> DNA
<213> synthetic construct

<400> 1508
ttttggacct caaatggac 19

<210> 1509
<211> 24
<212> DNA
<213> synthetic construct

<400> 1509
aaatagtctt cttttatgct tcct 24

<210> 1510
<211> 23
<212> DNA

<213> synthetic construct

<400> 1510
ccaagaactt accattattg aac 23

<210> 1511
<211> 20
<212> DNA
<213> synthetic construct

<400> 1511
tttcgtttct agccaatctc 20

<210> 1512
<211> 22
<212> DNA
<213> synthetic construct

<400> 1512
ttaaaggatt caaaaagggt gt 22

<210> 1513
<211> 21
<212> DNA
<213> synthetic construct

<400> 1513
aataattctt gtgctggttc a 21

<210> 1514
<211> 18
<212> DNA
<213> synthetic construct

<400> 1514
catggcacca gaaagaac 18

<210> 1515
<211> 20
<212> DNA
<213> synthetic construct

<400> 1515
aattgttggt ttgcagtagg 20

<210> 1516
<211> 20
<212> DNA
<213> synthetic construct

<400> 1516
tataatgccc cgaaaataaa 20

<210> 1517
<211> 22
<212> DNA
<213> synthetic construct

<400> 1517
ttaagcggat atctatcgta cc 22

<210> 1518
<211> 21
<212> DNA
<213> synthetic construct

<400> 1518
tggaacctgt ttgtacttga c 21

<210> 1519
<211> 19
<212> DNA
<213> synthetic construct

<400> 1519
ctagcccact ttccaattc 19

<210> 1520
<211> 18
<212> DNA
<213> synthetic construct

<400> 1520
gatttcctag ccggaatg 18

<210> 1521
<211> 26
<212> DNA
<213> synthetic construct

<400> 1521
attatgtaac cttagtcgta attgtc 26

<210> 1522
<211> 18
<212> DNA
<213> synthetic construct

<400> 1522
aagacgactg agcgtgtc 18

<210> 1523
<211> 22
<212> DNA
<213> synthetic construct

<400> 1523
tggactggaa gataagctag ag 22

<210> 1524
<211> 21
<212> DNA
<213> synthetic construct

<400> 1524
acatgtcaag aggattgttc a 21

<210> 1525
<211> 24
<212> DNA
<213> synthetic construct

<400> 1525
tttacattga ttgattaaat ttgc 24

<210> 1526
<211> 20
<212> DNA
<213> synthetic construct

<400> 1526
gccgaagata ctaaaccaaa 20

<210> 1527
<211> 21
<212> DNA
<213> synthetic construct

<400> 1527
tcagaaacat cagcagtaac a 21

<210> 1528
<211> 20
<212> DNA
<213> synthetic construct

<400> 1528
tctgatgttg ctgtttgttc 20

<210> 1529
<211> 20
<212> DNA
<213> synthetic construct

<400> 1529
atcttcagtt tcaccagtcc 20

<210> 1530
<211> 20
<212> DNA
<213> synthetic construct

<400> 1530
tcgaccatac catccaatac 20

<210> 1531
<211> 21
<212> DNA
<213> synthetic construct

<400> 1531
ttcacaaaga aacctagcaa c 21

<210> 1532
<211> 20
<212> DNA
<213> synthetic construct

<400> 1532
agaaatttgg cctgatgtta 20

<210> 1533
<211> 20
<212> DNA
<213> synthetic construct

<400> 1533
ggtgtttgtc aatcccaata 20

<210> 1534
<211> 20
<212> DNA
<213> synthetic construct

<400> 1534
aacagcaacc agaaatcaag 20

<210> 1535
<211> 23

<212> DNA
<213> synthetic construct

<400> 1535
ttaaatcaac aggaatcttc aac 23

<210> 1536
<211> 20
<212> DNA
<213> synthetic construct

<400> 1536
gctaccactt taaccgacac 20

<210> 1537
<211> 20
<212> DNA
<213> synthetic construct

<400> 1537
cttctccacc attagcactc 20

<210> 1538
<211> 20
<212> DNA
<213> synthetic construct

<400> 1538
tttcatcacc acctcaagtc 20

<210> 1539
<211> 20
<212> DNA
<213> synthetic construct

<400> 1539
atttcaacaa gccaatcaac 20

<210> 1540
<211> 20
<212> DNA
<213> synthetic construct

<400> 1540
ccagcaaaca attcctaatc 20

<210> 1541
<211> 19
<212> DNA
<213> synthetic construct

<400> 1541
ttcccattac cgctagaac 19

<210> 1542
<211> 20
<212> DNA
<213> synthetic construct

<400> 1542
gctcgtttga ttagatttgg 20

<210> 1543
<211> 19
<212> DNA
<213> synthetic construct

<400> 1543
tgttcacgga ctaaagcag 19

<210> 1544
<211> 20
<212> DNA
<213> synthetic construct

<400> 1544
cccaactaat tcagcatcac 20

<210> 1545
<211> 20
<212> DNA
<213> synthetic construct

<400> 1545
gtaccaattc ggctttactg 20

<210> 1546
<211> 18
<212> DNA
<213> synthetic construct

<400> 1546
aacagcaagc tgctcagt 18

<210> 1547
<211> 22
<212> DNA
<213> synthetic construct

<400> 1547

ttacaaaaac ccacttcttt tc 22

<210> 1548
<211> 20
<212> DNA
<213> synthetic construct

<400> 1548
gtcctttcaa gtgtttgtgg 20

<210> 1549
<211> 20
<212> DNA
<213> synthetic construct

<400> 1549
tattgttgtt gtgggtgttg 20

<210> 1550
<211> 20
<212> DNA
<213> synthetic construct

<400> 1550
ataacccaca taaggtctgg 20

<210> 1551
<211> 20
<212> DNA
<213> synthetic construct

<400> 1551
agctagttcg tggatctttg 20

<210> 1552
<211> 23
<212> DNA
<213> synthetic construct

<400> 1552
tgactacgat gactactgaa gaa 23

<210> 1553
<211> 20
<212> DNA
<213> synthetic construct

<400> 1553
ttttagcaac aatgggtttt 20

<210> 1554
<211> 22
<212> DNA
<213> synthetic construct

<400> 1554
attggtttca aacagttact ca 22

<210> 1555
<211> 22
<212> DNA
<213> synthetic construct

<400> 1555
attctcttca acatgcttct ct 22

<210> 1556
<211> 20
<212> DNA
<213> synthetic construct

<400> 1556
aaagagctaa ccacgtcaag 20

<210> 1557
<211> 20
<212> DNA
<213> synthetic construct

<400> 1557
gatcgacaaa gtcaaggaac 20

<210> 1558
<211> 23
<212> DNA
<213> synthetic construct

<400> 1558
aggtggtgtc atgaaattat tag 23

<210> 1559
<211> 20
<212> DNA
<213> synthetic construct

<400> 1559
acaggaattc gattggttag 20

<210> 1560

<211> 18
<212> DNA
<213> synthetic construct

<400> 1560
ttgcccaatc agcattac 18

<210> 1561
<211> 20
<212> DNA
<213> synthetic construct

<400> 1561
acaccttggt cttgtttcac 20

<210> 1562
<211> 24
<212> DNA
<213> synthetic construct

<400> 1562
atatcgaagt ggtctattta gagg 24

<210> 1563
<211> 23
<212> DNA
<213> synthetic construct

<400> 1563
ttgattctga acgatcatag act 23

<210> 1564
<211> 21
<212> DNA
<213> synthetic construct

<400> 1564
aattaaacaa agcaggaatc a 21

<210> 1565
<211> 19
<212> DNA
<213> synthetic construct

<400> 1565
ccaccacatg aaatggtaa 19

<210> 1566
<211> 19
<212> DNA

<213> synthetic construct

<400> 1566
agttgcacaa gtagcgatg 19

<210> 1567
<211> 20
<212> DNA
<213> synthetic construct

<400> 1567
tgagaagtca agcgagaaac 20

<210> 1568
<211> 19
<212> DNA
<213> synthetic construct

<400> 1568
cgcagacaag aaagacaac 19

<210> 1569
<211> 18
<212> DNA
<213> synthetic construct

<400> 1569
gtgtggtagc cgtttgag 18

<210> 1570
<211> 24
<212> DNA
<213> synthetic construct

<400> 1570
ttttcacttt taggagctat tttt 24

<210> 1571
<211> 20
<212> DNA
<213> synthetic construct

<400> 1571
ctttttcatc tgccgtagtc 20

<210> 1572
<211> 23
<212> DNA
<213> synthetic construct

<400> 1572
caaaaccaac agaagaagaa tta 23

<210> 1573
<211> 20
<212> DNA
<213> synthetic construct

<400> 1573
cgaacttcta ctcggtgcat 20

<210> 1574
<211> 20
<212> DNA
<213> synthetic construct

<400> 1574
ggcttagttg tcagttgtgg 20

<210> 1575
<211> 21
<212> DNA
<213> synthetic construct

<400> 1575
aattccttgc atttgataca g 21

<210> 1576
<211> 18
<212> DNA
<213> synthetic construct

<400> 1576
gtttgattgt tgcgaggt 18

<210> 1577
<211> 24
<212> DNA
<213> synthetic construct

<400> 1577
aatctactca attcattttt cctt 24

<210> 1578
<211> 26
<212> DNA
<213> synthetic construct

<400> 1578
ttttactaaa ccattaggtg taaaat 26

<210> 1579
<211> 20
<212> DNA
<213> synthetic construct

<400> 1579
caaaaacttg tggaccttct 20

<210> 1580
<211> 23
<212> DNA
<213> synthetic construct

<400> 1580
catgtattgg ttgttagata ggg 23

<210> 1581
<211> 19
<212> DNA
<213> synthetic construct

<400> 1581
gaggataagg ccatgactg 19

<210> 1582
<211> 20
<212> DNA
<213> synthetic construct

<400> 1582
gatcaggaag atcaatcagg 20

<210> 1583
<211> 20
<212> DNA
<213> synthetic construct

<400> 1583
cttagttccc acaccatcac 20

<210> 1584
<211> 19
<212> DNA
<213> synthetic construct

<400> 1584
gttgggctac tcttggttg 19

<210> 1585
<211> 21
<212> DNA
<213> synthetic construct

<400> 1585
gtgttgatac gttgttcttc c 21

<210> 1586
<211> 22
<212> DNA
<213> synthetic construct

<400> 1586
ttacgttaga agaagcatac ca 22

<210> 1587
<211> 18
<212> DNA
<213> synthetic construct

<400> 1587
aggacgatac agggcatt 18

<210> 1588
<211> 18
<212> DNA
<213> synthetic construct

<400> 1588
tttatgaagg cccaaaga 18

<210> 1589
<211> 20
<212> DNA
<213> synthetic construct

<400> 1589
agccagaatt agcatcaaca 20

<210> 1590
<211> 19
<212> DNA
<213> synthetic construct

<400> 1590
tttacctcac cgaccaatc 19

<210> 1591
<211> 18

<212> DNA
<213> synthetic construct

<400> 1591
tggctgaaga agctcaac 18

<210> 1592
<211> 20
<212> DNA
<213> synthetic construct

<400> 1592
tctgtttacg ttagcggtct 20

<210> 1593
<211> 21
<212> DNA
<213> synthetic construct

<400> 1593
tccctaagtt cattgacaac a 21

<210> 1594
<211> 18
<212> DNA
<213> synthetic construct

<400> 1594
ggcgacgaag ttaaagtg 18

<210> 1595
<211> 18
<212> DNA
<213> synthetic construct

<400> 1595
aatggtgatc ggtccttc 18

<210> 1596
<211> 21
<212> DNA
<213> synthetic construct

<400> 1596
gatacgaaga agatagcgaa a 21

<210> 1597
<211> 19
<212> DNA
<213> synthetic construct

<400> 1597
acaatagcca tcccagcta 19

<210> 1598
<211> 22
<212> DNA
<213> synthetic construct

<400> 1598
aagatggtac gtgtattcgt tt 22

<210> 1599
<211> 20
<212> DNA
<213> synthetic construct

<400> 1599
aattacttct gtcgccttca 20

<210> 1600
<211> 20
<212> DNA
<213> synthetic construct

<400> 1600
ttatttctgt tgagggcaaa 20

<210> 1601
<211> 20
<212> DNA
<213> synthetic construct

<400> 1601
tcttcttcca cttcttctgg 20

<210> 1602
<211> 20
<212> DNA
<213> synthetic construct

<400> 1602
ttgatcgttt tgacgtaatg 20

<210> 1603
<211> 21
<212> DNA
<213> synthetic construct

<400> 1603

taatcgtttc tttctctttg g 21

<210> 1604
<211> 21
<212> DNA
<213> synthetic construct

<400> 1604
agcgactaga gagcatacaa g 21

<210> 1605
<211> 22
<212> DNA
<213> synthetic construct

<400> 1605
tcagagcatc aaataaatca ac 22

<210> 1606
<211> 19
<212> DNA
<213> synthetic construct

<400> 1606
aaattgttgc acgtatgga 19

<210> 1607
<211> 18
<212> DNA
<213> synthetic construct

<400> 1607
tttgccgact aaacacct 18

<210> 1608
<211> 19
<212> DNA
<213> synthetic construct

<400> 1608
caatggaaca aaggccact 19

<210> 1609
<211> 18
<212> DNA
<213> synthetic construct

<400> 1609
tgcttggcga actaaagc 18

<210> 1610
<211> 18
<212> DNA
<213> synthetic construct

<400> 1610
ctgcggttaa agtcgttg 18

<210> 1611
<211> 20
<212> DNA
<213> synthetic construct

<400> 1611
aatcacgtag ccttacatcc 20

<210> 1612
<211> 20
<212> DNA
<213> synthetic construct

<400> 1612
atccgactat gcgtttactg 20

<210> 1613
<211> 20
<212> DNA
<213> synthetic construct

<400> 1613
tatgttcgcc aatttctttc 20

<210> 1614
<211> 20
<212> DNA
<213> synthetic construct

<400> 1614
aggatcaatc gtaaatggtg 20

<210> 1615
<211> 18
<212> DNA
<213> synthetic construct

<400> 1615
ttcgctgcaa tcttatcc 18

<210> 1616

<211> 20
<212> DNA
<213> synthetic construct

<400> 1616
aagatggtga aacattggtg 20

<210> 1617
<211> 21
<212> DNA
<213> synthetic construct

<400> 1617
tctttaatct cagctttttg c 21

<210> 1618
<211> 20
<212> DNA
<213> synthetic construct

<400> 1618
gtttccgttc aaataaccac 20

<210> 1619
<211> 21
<212> DNA
<213> synthetic construct

<400> 1619
caattcacgc acttctttat c 21

<210> 1620
<211> 18
<212> DNA
<213> synthetic construct

<400> 1620
aattgcagga ggttcaca 18

<210> 1621
<211> 20
<212> DNA
<213> synthetic construct

<400> 1621
cttcagaggt cgctaaatca 20

<210> 1622
<211> 20
<212> DNA

<213> synthetic construct

<400> 1622
aatgcgtgat cagggtgtat 20

<210> 1623
<211> 27
<212> DNA
<213> synthetic construct

<400> 1623
tgtaattatg agtcgaacat ttttatt 27

<210> 1624
<211> 20
<212> DNA
<213> synthetic construct

<400> 1624
ctcaacagct tcaacaatcc 20

<210> 1625
<211> 20
<212> DNA
<213> synthetic construct

<400> 1625
ccactattcg atcttccttg 20

<210> 1626
<211> 20
<212> DNA
<213> synthetic construct

<400> 1626
aggtttagaa gtgggggagt 20

<210> 1627
<211> 18
<212> DNA
<213> synthetic construct

<400> 1627
atcggcgctt taatcgtt 18

<210> 1628
<211> 20
<212> DNA
<213> synthetic construct

<400> 1628
aacgcacatc tgaaagctac 20

<210> 1629
<211> 19
<212> DNA
<213> synthetic construct

<400> 1629
tacctgaacg agctgaatg 19

<210> 1630
<211> 20
<212> DNA
<213> synthetic construct

<400> 1630
atggagggtg ataacatgaa 20

<210> 1631
<211> 23
<212> DNA
<213> synthetic construct

<400> 1631
aagatagttc tgataaccaa tcg 23

<210> 1632
<211> 19
<212> DNA
<213> synthetic construct

<400> 1632
caggaggaac attggttgt 19

<210> 1633
<211> 19
<212> DNA
<213> synthetic construct

<400> 1633
cgtcataccc tggattgtt 19

<210> 1634
<211> 22
<212> DNA
<213> synthetic construct

<400> 1634
cgacagaact tgctaaagta ga 22

<210> 1635
<211> 18
<212> DNA
<213> synthetic construct

<400> 1635
gtgattccgc catagttg 18

<210> 1636
<211> 19
<212> DNA
<213> synthetic construct

<400> 1636
cttctttcgt gctttcaac 19

<210> 1637
<211> 21
<212> DNA
<213> synthetic construct

<400> 1637
aaatttagat catcattttg c 21

<210> 1638
<211> 22
<212> DNA
<213> synthetic construct

<400> 1638
aaacctggat gatagtgata gg 22

<210> 1639
<211> 19
<212> DNA
<213> synthetic construct

<400> 1639
gactcatttc ctgctgatg 19

<210> 1640
<211> 21
<212> DNA
<213> synthetic construct

<400> 1640
caaggagagc atagtgaatg t 21

<210> 1641
<211> 26
<212> DNA
<213> synthetic construct

<400> 1641
tgcaatagga attaagagta ataaaa 26

<210> 1642
<211> 20
<212> DNA
<213> synthetic construct

<400> 1642
gttagggcac ttagcttttg 20

<210> 1643
<211> 27
<212> DNA
<213> synthetic construct

<400> 1643
tgggtatatt agttttaatt tcctatt 27

<210> 1644
<211> 23
<212> DNA
<213> synthetic construct

<400> 1644
tggaaaattt aagtgtagtt cct 23

<210> 1645
<211> 24
<212> DNA
<213> synthetic construct

<400> 1645
ctactcctaa gcctatggta aaac 24

<210> 1646
<211> 20
<212> DNA
<213> synthetic construct

<400> 1646
agcaaagtgg taacgagaag 20

<210> 1647
<211> 21

<212> DNA
<213> synthetic construct

<400> 1647
atacgcatca actcaggata g 21

<210> 1648
<211> 20
<212> DNA
<213> synthetic construct

<400> 1648
tagttggaat gaccgagaac 20

<210> 1649
<211> 20
<212> DNA
<213> synthetic construct

<400> 1649
agtgtaacgg acgataaagg 20

<210> 1650
<211> 20
<212> DNA
<213> synthetic construct

<400> 1650
tcaacgtcac aaacaagaac 20

<210> 1651
<211> 21
<212> DNA
<213> synthetic construct

<400> 1651
cctaagagac ttccttcatc c 21

<210> 1652
<211> 18
<212> DNA
<213> synthetic construct

<400> 1652
tcggaagtat tgcgtttg 18

<210> 1653
<211> 21
<212> DNA
<213> synthetic construct

<400> 1653
ttatcgacat tctctgtttc c 21

<210> 1654
<211> 19
<212> DNA
<213> synthetic construct

<400> 1654
ttgtctttgg gcttctctc 19

<210> 1655
<211> 21
<212> DNA
<213> synthetic construct

<400> 1655
tttctgtatt gcttcttggt c 21

<210> 1656
<211> 23
<212> DNA
<213> synthetic construct

<400> 1656
ctatagattc cctatcttgt tgg 23

<210> 1657
<211> 21
<212> DNA
<213> synthetic construct

<400> 1657
atatttaccg caatgaaaca c 21

<210> 1658
<211> 27
<212> DNA
<213> synthetic construct

<400> 1658
atgtatgtat cttttgttct aagttgt 27

<210> 1659
<211> 20
<212> DNA
<213> synthetic construct

<400> 1659

aaatcccaat cgtctaagtg 20

<210> 1660
<211> 26
<212> DNA
<213> synthetic construct

<400> 1660
aaagtactac cttttattgc cttagt 26

<210> 1661
<211> 26
<212> DNA
<213> synthetic construct

<400> 1661
tgttttataa gtgttctttg tttttc 26

<210> 1662
<211> 21
<212> DNA
<213> synthetic construct

<400> 1662
tgaacaaaaa gcacaggata g 21

<210> 1663
<211> 18
<212> DNA
<213> synthetic construct

<400> 1663
tactaaaccc ccgttgtg 18

<210> 1664
<211> 24
<212> DNA
<213> synthetic construct

<400> 1664
tgatgaaaat ttaaaagaag aagc 24

<210> 1665
<211> 23
<212> DNA
<213> synthetic construct

<400> 1665
taaatcctcc attaaatcct cca 23

<210> 1666
<211> 21
<212> DNA
<213> synthetic construct

<400> 1666
tcaaatacac gtaagccttc t 21

<210> 1667
<211> 22
<212> DNA
<213> synthetic construct

<400> 1667
aagttttcat ttcgagaagt tg 22

<210> 1668
<211> 25
<212> DNA
<213> synthetic construct

<400> 1668
cattattttc attaggggat attag 25

<210> 1669
<211> 23
<212> DNA
<213> synthetic construct

<400> 1669
agattcctta ctttagcttt tcc 23

<210> 1670
<211> 19
<212> DNA
<213> synthetic construct

<400> 1670
ttgcgatttc tgttgtagg 19

<210> 1671
<211> 19
<212> DNA
<213> synthetic construct

<400> 1671
aaccaaagtc aaacccatc 19

<210> 1672

<211> 18
<212> DNA
<213> synthetic construct

<400> 1672
aatcaagccg ctgaaaag 18

<210> 1673
<211> 20
<212> DNA
<213> synthetic construct

<400> 1673
caaatttagc tttggcttcc 20

<210> 1674
<211> 21
<212> DNA
<213> synthetic construct

<400> 1674
aaatgggtga aggaagatta g 21

<210> 1675
<211> 20
<212> DNA
<213> synthetic construct

<400> 1675
accagtgctt tctattccag 20

<210> 1676
<211> 20
<212> DNA
<213> synthetic construct

<400> 1676
aggtacaggc atctttgttg 20

<210> 1677
<211> 21
<212> DNA
<213> synthetic construct

<400> 1677
ttccataatt gttccatctg t 21

<210> 1678
<211> 20
<212> DNA

<213> synthetic construct

<400> 1678
ctggttcaaa agaagccatt 20

<210> 1679
<211> 22
<212> DNA
<213> synthetic construct

<400> 1679
tttagtttgt caacaatcac tg 22

<210> 1680
<211> 20
<212> DNA
<213> synthetic construct

<400> 1680
gatcgcgtcg taattagagt 20

<210> 1681
<211> 20
<212> DNA
<213> synthetic construct

<400> 1681
ttcaacagtg gcaataatgt 20

<210> 1682
<211> 19
<212> DNA
<213> synthetic construct

<400> 1682
atctcgcgga acaattaga 19

<210> 1683
<211> 21
<212> DNA
<213> synthetic construct

<400> 1683
aataagccaa tccacatatc a 21

<210> 1684
<211> 20
<212> DNA
<213> synthetic construct

<400> 1684
tcggctctaa tggtatgttc 20

<210> 1685
<211> 19
<212> DNA
<213> synthetic construct

<400> 1685
gttgacgtgc ttgttcttc 19

<210> 1686
<211> 23
<212> DNA
<213> synthetic construct

<400> 1686
gcttcattag cattagaaca atc 23

<210> 1687
<211> 20
<212> DNA
<213> synthetic construct

<400> 1687
aaacctgcat cccatactac 20

<210> 1688
<211> 22
<212> DNA
<213> synthetic construct

<400> 1688
ttaactgaac aagaaaagca ag 22

<210> 1689
<211> 24
<212> DNA
<213> synthetic construct

<400> 1689
ttaaatctcc tgaaatagaa actg 24

<210> 1690
<211> 21
<212> DNA
<213> synthetic construct

<400> 1690
acaaccaaca gtgaaagcta c 21

<210> 1691
<211> 20
<212> DNA
<213> synthetic construct

<400> 1691
ttgttagcca attctgcttc 20

<210> 1692
<211> 20
<212> DNA
<213> synthetic construct

<400> 1692
cattggtggc tatttcattc 20

<210> 1693
<211> 20
<212> DNA
<213> synthetic construct

<400> 1693
ctttctgctt ccattgtttc 20

<210> 1694
<211> 20
<212> DNA
<213> synthetic construct

<400> 1694
tatcttagct tcgcaaccag 20

<210> 1695
<211> 20
<212> DNA
<213> synthetic construct

<400> 1695
attgtctgcc acgtataacc 20

<210> 1696
<211> 19
<212> DNA
<213> synthetic construct

<400> 1696
gagcaacgtc tcttcttcc 19

<210> 1697
<211> 18
<212> DNA
<213> synthetic construct

<400> 1697
gagcgtgtct atcgcatc 18

<210> 1698
<211> 19
<212> DNA
<213> synthetic construct

<400> 1698
ttcatcgcaa taatcgttc 19

<210> 1699
<211> 18
<212> DNA
<213> synthetic construct

<400> 1699
taacacatcc gccatcac 18

<210> 1700
<211> 22
<212> DNA
<213> synthetic construct

<400> 1700
tcttcatttg ttgaatatgc tg 22

<210> 1701
<211> 20
<212> DNA
<213> synthetic construct

<400> 1701
tggaatcgaa cctgtttatc 20

<210> 1702
<211> 19
<212> DNA
<213> synthetic construct

<400> 1702
attattgtcg cctctttcc 19

<210> 1703
<211> 21

<212> DNA
<213> synthetic construct

<400> 1703
gctatttgtt atcgcattct g 21

<210> 1704
<211> 20
<212> DNA
<213> synthetic construct

<400> 1704
ctcctgatcc tcttcttgtg 20

<210> 1705
<211> 23
<212> DNA
<213> synthetic construct

<400> 1705
atgttatact ctgctcttca acc 23

<210> 1706
<211> 20
<212> DNA
<213> synthetic construct

<400> 1706
cggatgaagg aagtaaagaa 20

<210> 1707
<211> 23
<212> DNA
<213> synthetic construct

<400> 1707
catatgctcg taaatacttg aaa 23

<210> 1708
<211> 18
<212> DNA
<213> synthetic construct

<400> 1708
aaagcgattt gttgctga 18

<210> 1709
<211> 25
<212> DNA
<213> synthetic construct

<400> 1709
gaaaattaaa ttagcaagga taaaa 25

<210> 1710
<211> 18
<212> DNA
<213> synthetic construct

<400> 1710
agccggtaaa ctcagtcc 18

<210> 1711
<211> 19
<212> DNA
<213> synthetic construct

<400> 1711
caccataagg caattgaag 19

<210> 1712
<211> 19
<212> DNA
<213> synthetic construct

<400> 1712
attactcgtt tcccctgac 19

<210> 1713
<211> 20
<212> DNA
<213> synthetic construct

<400> 1713
acaatcgtca caactgacac 20

<210> 1714
<211> 22
<212> DNA
<213> synthetic construct

<400> 1714
atgttgaaga aagaaacaat ga 22

<210> 1715
<211> 24
<212> DNA
<213> synthetic construct

<400> 1715

ctgaataatt tcttaaaggg aaaa 24

<210> 1716
<211> 21
<212> DNA
<213> synthetic construct

<400> 1716
tcagtcagtt tcttgacctt t 21

<210> 1717
<211> 20
<212> DNA
<213> synthetic construct

<400> 1717
ttagtccgtt tctttccatc 20

<210> 1718
<211> 20
<212> DNA
<213> synthetic construct

<400> 1718
ccaattaggt gaagcagaac 20

<210> 1719
<211> 21
<212> DNA
<213> synthetic construct

<400> 1719
tttgatggtt gctaaataag g 21

<210> 1720
<211> 20
<212> DNA
<213> synthetic construct

<400> 1720
gattgccttt cctttctatg 20

<210> 1721
<211> 19
<212> DNA
<213> synthetic construct

<400> 1721
acatctttga cggcttctc 19

<210> 1722
<211> 20
<212> DNA
<213> synthetic construct

<400> 1722
caagaacaag aaactcagca 20

<210> 1723
<211> 18
<212> DNA
<213> synthetic construct

<400> 1723
catgtaacgg cagtggag 18

<210> 1724
<211> 21
<212> DNA
<213> synthetic construct

<400> 1724
aaattcactt actgcaccag a 21

<210> 1725
<211> 20
<212> DNA
<213> synthetic construct

<400> 1725
atggcgaaag aatatgtcaa 20

<210> 1726
<211> 24
<212> DNA
<213> synthetic construct

<400> 1726
gcatatttcg cttgatatat aggt 24

<210> 1727
<211> 21
<212> DNA
<213> synthetic construct

<400> 1727
ttattcatgc tggattattc g 21

<210> 1728

<211> 20
<212> DNA
<213> synthetic construct

<400> 1728
atatttcatc cccagctctt 20

<210> 1729
<211> 26
<212> DNA
<213> synthetic construct

<400> 1729
aagtatgaaa gagataaaac aaacat 26

<210> 1730
<211> 20
<212> DNA
<213> synthetic construct

<400> 1730
agcagttccg gtatctcttt 20

<210> 1731
<211> 21
<212> DNA
<213> synthetic construct

<400> 1731
tgaagaaagg gtaatgtttt g 21

<210> 1732
<211> 21
<212> DNA
<213> synthetic construct

<400> 1732
tgaagtcctt tgtctttgtt g 21

<210> 1733
<211> 21
<212> DNA
<213> synthetic construct

<400> 1733
caatacacac cgatttagag g 21

<210> 1734
<211> 27
<212> DNA

<213> synthetic construct

<400> 1734
tctattaaac agacacaact tatctat 27

<210> 1735
<211> 20
<212> DNA
<213> synthetic construct

<400> 1735
ccgggatcta attcatattt 20

<210> 1736
<211> 20
<212> DNA
<213> synthetic construct

<400> 1736
ttcataagga cgatgtgttg 20

<210> 1737
<211> 20
<212> DNA
<213> synthetic construct

<400> 1737
tgttctagct cttgctttcc 20

<210> 1738
<211> 24
<212> DNA
<213> synthetic construct

<400> 1738
attatgtgaa gatcaaatta taca 24

<210> 1739
<211> 21
<212> DNA
<213> synthetic construct

<400> 1739
ttttgttgca tctatccttt c 21

<210> 1740
<211> 19
<212> DNA
<213> synthetic construct

<400> 1740
atcttgatct tgccattcc 19

<210> 1741
<211> 20
<212> DNA
<213> synthetic construct

<400> 1741
tgctttctca atcttcgttt 20

<210> 1742
<211> 18
<212> DNA
<213> synthetic construct

<400> 1742
tgaatcttca gcaacaga 18

<210> 1743
<211> 18
<212> DNA
<213> synthetic construct

<400> 1743
tttggttgtt caggtgtt 18

<210> 1744
<211> 20
<212> DNA
<213> synthetic construct

<400> 1744
aggatcattt gtctcctacg 20

<210> 1745
<211> 18
<212> DNA
<213> synthetic construct

<400> 1745
atggtgcgct tagcaaat 18

<210> 1746
<211> 18
<212> DNA
<213> synthetic construct

<400> 1746
ctgatcaacg acgcatgg 18

<210> 1747
<211> 18
<212> DNA
<213> synthetic construct

<400> 1747
gcgctgagct ggtatcct 18

<210> 1748
<211> 18
<212> DNA
<213> synthetic construct

<400> 1748
ccgatcgagt ccattacc 18

<210> 1749
<211> 18
<212> DNA
<213> synthetic construct

<400> 1749
gcgtacggcg aatttact 18

<210> 1750
<211> 20
<212> DNA
<213> synthetic construct

<400> 1750
gcctgcttcg ttgatagatt 20

<210> 1751
<211> 18
<212> DNA
<213> synthetic construct

<400> 1751
atactgccgc ctgcttgt 18

<210> 1752
<211> 18
<212> DNA
<213> synthetic construct

<400> 1752
gccaccttta ttccttcc 18

<210> 1753
<211> 20
<212> DNA
<213> synthetic construct

<400> 1753
agcatcccca tcatatacag 20

<210> 1754
<211> 18
<212> DNA
<213> synthetic construct

<400> 1754
gtcagcatcg aggcattg 18

<210> 1755
<211> 19
<212> DNA
<213> synthetic construct

<400> 1755
cgtcaatcat ctgctcaac 19

<210> 1756
<211> 20
<212> DNA
<213> synthetic construct

<400> 1756
gttgttctcc actacccact 20

<210> 1757
<211> 20
<212> DNA
<213> synthetic construct

<400> 1757
agatcacctc aatccagaaa 20

<210> 1758
<211> 19
<212> DNA
<213> synthetic construct

<400> 1758
gacttccggt ttttcacac 19

<210> 1759
<211> 18

<212> DNA
<213> synthetic construct

<400> 1759
cggtacatgc gttttgtc 18

<210> 1760
<211> 18
<212> DNA
<213> synthetic construct

<400> 1760
ccagctcgga aaacttct 18

<210> 1761
<211> 19
<212> DNA
<213> synthetic construct

<400> 1761
ggcgattgtc cataacgtc 19

<210> 1762
<211> 18
<212> DNA
<213> synthetic construct

<400> 1762
taacggcaaa gacgctaa 18

<210> 1763
<211> 19
<212> DNA
<213> synthetic construct

<400> 1763
tgaccagggc ttctacttc 19

<210> 1764
<211> 21
<212> DNA
<213> synthetic construct

<400> 1764
cctataatat ctttgccacc a 21

<210> 1765
<211> 18
<212> DNA
<213> synthetic construct

<400> 1765
ccagggatcc agagtttt 18

<210> 1766
<211> 18
<212> DNA
<213> synthetic construct

<400> 1766
gcttgaaatg ccaaagtg 18

<210> 1767
<211> 22
<212> DNA
<213> synthetic construct

<400> 1767
cagatcagaa acagagatac ga 22

<210> 1768
<211> 19
<212> DNA
<213> synthetic construct

<400> 1768
cagtcaggaa cacagcatt 19

<210> 1769
<211> 20
<212> DNA
<213> synthetic construct

<400> 1769
tctaaggtat aagccgcatc 20

<210> 1770
<211> 18
<212> DNA
<213> synthetic construct

<400> 1770
ccgttaccga tgttgatt 18

<210> 1771
<211> 20
<212> DNA
<213> synthetic construct

<400> 1771

gagtgaggag ggtatgttga 20

<210> 1772
<211> 19
<212> DNA
<213> synthetic construct

<400> 1772
ccgatcatga gaacatcag 19

<210> 1773
<211> 19
<212> DNA
<213> synthetic construct

<400> 1773
ggcatctctt cctggttag 19

<210> 1774
<211> 18
<212> DNA
<213> synthetic construct

<400> 1774
agagatgggc tgcaaact 18

<210> 1775
<211> 19
<212> DNA
<213> synthetic construct

<400> 1775
cgatccctaa atgctgtct 19

<210> 1776
<211> 23
<212> DNA
<213> synthetic construct

<400> 1776
acagattaca ttgtcatttc ctg 23

<210> 1777
<211> 19
<212> DNA
<213> synthetic construct

<400> 1777
cctcctcaaa aacctgttc 19

<210> 1778
<211> 18
<212> DNA
<213> synthetic construct

<400> 1778
atggattttg ccttaccc 18

<210> 1779
<211> 20
<212> DNA
<213> synthetic construct

<400> 1779
ccaagtaaca tcaccagacc 20

<210> 1780
<211> 19
<212> DNA
<213> synthetic construct

<400> 1780
tatttacctt tcccggtca 19

<210> 1781
<211> 18
<212> DNA
<213> synthetic construct

<400> 1781
caatcacgaa ctgcgttt 18

<210> 1782
<211> 20
<212> DNA
<213> synthetic construct

<400> 1782
tgctgctgat accaatgtag 20

<210> 1783
<211> 21
<212> DNA
<213> synthetic construct

<400> 1783
gtaatttcgt aagtcgcgta g 21

<210> 1784

<211> 19
<212> DNA
<213> synthetic construct

<400> 1784
cgcaatacca taccttcac 19

<210> 1785
<211> 18
<212> DNA
<213> synthetic construct

<400> 1785
ctcgtggatc tgatacgg 18

<210> 1786
<211> 20
<212> DNA
<213> synthetic construct

<400> 1786
gtgcgtttaa tctcctcaag 20

<210> 1787
<211> 18
<212> DNA
<213> synthetic construct

<400> 1787
gctatccgga caacttcg 18

<210> 1788
<211> 18
<212> DNA
<213> synthetic construct

<400> 1788
aaattgccga agctcaat 18

<210> 1789
<211> 18
<212> DNA
<213> synthetic construct

<400> 1789
ctgacggtca tcagcagt 18

<210> 1790
<211> 18
<212> DNA

<213> synthetic construct

<400> 1790
agagagcgtc attgagca 18

<210> 1791
<211> 18
<212> DNA
<213> synthetic construct

<400> 1791
aattttcgcc agttgatg 18

<210> 1792
<211> 18
<212> DNA
<213> synthetic construct

<400> 1792
acagggttga tcctcgtc 18

<210> 1793
<211> 19
<212> DNA
<213> synthetic construct

<400> 1793
gttaatgaaa cggcgaaac 19

<210> 1794
<211> 19
<212> DNA
<213> synthetic construct

<400> 1794
aaaagacaag ctgttgctg 19

<210> 1795
<211> 19
<212> DNA
<213> synthetic construct

<400> 1795
cagataatcg ggttgtgaa 19

<210> 1796
<211> 20
<212> DNA
<213> synthetic construct

<400> 1796
atttcataaa ctcggattgg 20

<210> 1797
<211> 18
<212> DNA
<213> synthetic construct

<400> 1797
ggcaaacagc actacagg 18

<210> 1798
<211> 20
<212> DNA
<213> synthetic construct

<400> 1798
aggttcaggt agctggaaaa 20

<210> 1799
<211> 21
<212> DNA
<213> synthetic construct

<400> 1799
atgattctgg gttagatctc c 21

<210> 1800
<211> 22
<212> DNA
<213> synthetic construct

<400> 1800
tgattcaatt ttagtgatct gc 22

<210> 1801
<211> 18
<212> DNA
<213> synthetic construct

<400> 1801
aggtgctatc cggctaat 18

<210> 1802
<211> 18
<212> DNA
<213> synthetic construct

<400> 1802
acatgatccc ggagaaat 18

<210> 1803
<211> 21
<212> DNA
<213> synthetic construct

<400> 1803
ttacaaaatc tctgcaaatc g 21

<210> 1804
<211> 20
<212> DNA
<213> synthetic construct

<400> 1804
tggaaccagt gatcaatttc 20

<210> 1805
<211> 18
<212> DNA
<213> synthetic construct

<400> 1805
gctgctgaac ttccttcc 18

<210> 1806
<211> 18
<212> DNA
<213> synthetic construct

<400> 1806
ggtgtcatcc caaacctg 18

<210> 1807
<211> 18
<212> DNA
<213> synthetic construct

<400> 1807
ggtaccgaag tggtggtc 18

<210> 1808
<211> 18
<212> DNA
<213> synthetic construct

<400> 1808
cctgctgcta ttgctgtc 18

<210> 1809
<211> 18
<212> DNA
<213> synthetic construct

<400> 1809
gtatggtgcc agatgctc 18

<210> 1810
<211> 23
<212> DNA
<213> synthetic construct

<400> 1810
aatttaacct ggtttgataa gaa 23

<210> 1811
<211> 26
<212> DNA
<213> synthetic construct

<400> 1811
caaaatatga actatcagaa agattg 26

<210> 1812
<211> 20
<212> DNA
<213> synthetic construct

<400> 1812
ggggagaata tccttgtctt 20

<210> 1813
<211> 18
<212> DNA
<213> synthetic construct

<400> 1813
gcagcggcca taattttt 18

<210> 1814
<211> 18
<212> DNA
<213> synthetic construct

<400> 1814
gactcgcggg tgattaac 18

<210> 1815
<211> 19

<212> DNA
<213> synthetic construct

<400> 1815
cagtccctta atcgctttc 19

<210> 1816
<211> 18
<212> DNA
<213> synthetic construct

<400> 1816
atgaaacgac ctgattgc 18

<210> 1817
<211> 18
<212> DNA
<213> synthetic construct

<400> 1817
gtgtggaccg aagaattg 18

<210> 1818
<211> 23
<212> DNA
<213> synthetic construct

<400> 1818
ttgcgtatat agaagtcata cca 23

<210> 1819
<211> 18
<212> DNA
<213> synthetic construct

<400> 1819
gcgtgagctg tctaccag 18

<210> 1820
<211> 19
<212> DNA
<213> synthetic construct

<400> 1820
gattcctgct ctgacaacc 19

<210> 1821
<211> 21
<212> DNA
<213> synthetic construct

<400> 1821
gccttgaata ctggaagaaa g 21

<210> 1822
<211> 19
<212> DNA
<213> synthetic construct

<400> 1822
attgacggga tatctgacc 19

<210> 1823
<211> 21
<212> DNA
<213> synthetic construct

<400> 1823
acatttgcag catatttgat t 21

<210> 1824
<211> 20
<212> DNA
<213> synthetic construct

<400> 1824
cagcagcaag gtgtttaatg 20

<210> 1825
<211> 18
<212> DNA
<213> synthetic construct

<400> 1825
gcagtggcca gagtatgt 18

<210> 1826
<211> 19
<212> DNA
<213> synthetic construct

<400> 1826
ggggagaaag agaccctca 19

<210> 1827
<211> 21
<212> DNA
<213> synthetic construct

<400> 1827

tatttgccca ggacttctgt t 21

<210> 1828
<211> 20
<212> DNA
<213> synthetic construct

<400> 1828
agtaaattca ggctggctct 20

<210> 1829
<211> 22
<212> DNA
<213> synthetic construct

<400> 1829
tttacgtggg ttacagatat gg 22

<210> 1830
<211> 20
<212> DNA
<213> synthetic construct

<400> 1830
tcatttgaag aacgacacag 20

<210> 1831
<211> 18
<212> DNA
<213> synthetic construct

<400> 1831
gtcaggccat attgttgg 18

<210> 1832
<211> 20
<212> DNA
<213> synthetic construct

<400> 1832
tgcctctatt atccaacctc 20

<210> 1833
<211> 20
<212> DNA
<213> synthetic construct

<400> 1833
gacgatccag aatgctaaac 20

<210> 1834
<211> 20
<212> DNA
<213> synthetic construct

<400> 1834
ggtttaaggc aggtagtcag 20

<210> 1835
<211> 20
<212> DNA
<213> synthetic construct

<400> 1835
ccacgataca tgaaacacag 20

<210> 1836
<211> 20
<212> DNA
<213> synthetic construct

<400> 1836
gtggcattgg tcgttatagt 20

<210> 1837
<211> 19
<212> DNA
<213> synthetic construct

<400> 1837
caaggacgga ctctttctc 19

<210> 1838
<211> 21
<212> DNA
<213> synthetic construct

<400> 1838
tgacctatca ctcggatatt g 21

<210> 1839
<211> 22
<212> DNA
<213> synthetic construct

<400> 1839
agagctggaa gagaatgtat tt 22

<210> 1840

<211> 18
<212> DNA
<213> synthetic construct

<400> 1840
ttcaggcgaa atgctatg 18

<210> 1841
<211> 20
<212> DNA
<213> synthetic construct

<400> 1841
tggttccgta gaggaataag 20

<210> 1842
<211> 20
<212> DNA
<213> synthetic construct

<400> 1842
gctatgaact gatcctggtg 20

<210> 1843
<211> 20
<212> DNA
<213> synthetic construct

<400> 1843
cgatatggcg tactttatcc 20

<210> 1844
<211> 20
<212> DNA
<213> synthetic construct

<400> 1844
ctctgcctct attgctcttg 20

<210> 1845
<211> 20
<212> DNA
<213> synthetic construct

<400> 1845
gcactatatc cctgctcttg 20

<210> 1846
<211> 19
<212> DNA

<213> synthetic construct

<400> 1846
tatcgatgcg gatgaaaat 19

<210> 1847
<211> 24
<212> DNA
<213> synthetic construct

<400> 1847
ttaatataac cttcaagcaa cact 24

<210> 1848
<211> 20
<212> DNA
<213> synthetic construct

<400> 1848
atccaatgac cagaaatgag 20

<210> 1849
<211> 20
<212> DNA
<213> synthetic construct

<400> 1849
agatatgcgt aatccacagg 20

<210> 1850
<211> 20
<212> DNA
<213> synthetic construct

<400> 1850
cgtaaatatg ggacaaaggt 20

<210> 1851
<211> 20
<212> DNA
<213> synthetic construct

<400> 1851
tagatttcgc acagtcaaag 20

<210> 1852
<211> 20
<212> DNA
<213> synthetic construct

<400> 1852
gcaagggtag aggtgtattg 20

<210> 1853
<211> 20
<212> DNA
<213> synthetic construct

<400> 1853
tggctgtgaa ctttgtgtag 20

<210> 1854
<211> 20
<212> DNA
<213> synthetic construct

<400> 1854
ataagccatg tgtttcttcc 20

<210> 1855
<211> 20
<212> DNA
<213> synthetic construct

<400> 1855
cacgttctag cgtctactca 20

<210> 1856
<211> 18
<212> DNA
<213> synthetic construct

<400> 1856
gccggtaatc ttgagctg 18

<210> 1857
<211> 18
<212> DNA
<213> synthetic construct

<400> 1857
ccgatctgca cgtcgata 18

<210> 1858
<211> 18
<212> DNA
<213> synthetic construct

<400> 1858
cctgctctat tccgtcag 18

<210> 1859
<211> 19
<212> DNA
<213> synthetic construct

<400> 1859
gatttcctgt acccggatg 19

<210> 1860
<211> 19
<212> DNA
<213> synthetic construct

<400> 1860
ggctgtctgc tatggattt 19

<210> 1861
<211> 18
<212> DNA
<213> synthetic construct

<400> 1861
ggtcgatcat cagattgg 18

<210> 1862
<211> 18
<212> DNA
<213> synthetic construct

<400> 1862
tggcgtttat tttctgga 18

<210> 1863
<211> 18
<212> DNA
<213> synthetic construct

<400> 1863
gtagcgttgc atgggata 18

<210> 1864
<211> 18
<212> DNA
<213> synthetic construct

<400> 1864
cgttctcccc tgattctt 18

<210> 1865
<211> 18
<212> DNA
<213> synthetic construct

<400> 1865
tcatagcggt ggctcagt 18

<210> 1866
<211> 18
<212> DNA
<213> synthetic construct

<400> 1866
cggcgcattt aaaatatc 18

<210> 1867
<211> 20
<212> DNA
<213> synthetic construct

<400> 1867
cattaaccgg caaatagaac 20

<210> 1868
<211> 18
<212> DNA
<213> synthetic construct

<400> 1868
tattgaaggc accaccag 18

<210> 1869
<211> 20
<212> DNA
<213> synthetic construct

<400> 1869
gatgaatatc ggacaggaac 20

<210> 1870
<211> 18
<212> DNA
<213> synthetic construct

<400> 1870
cctggagtgt gcataagg 18

<210> 1871
<211> 19

<212> DNA
<213> synthetic construct

<400> 1871
cagcgaaaga tggataatg 19

<210> 1872
<211> 20
<212> DNA
<213> synthetic construct

<400> 1872
acacgcatat aaaccgcaac 20

<210> 1873
<211> 18
<212> DNA
<213> synthetic construct

<400> 1873
gaatccagcg tggagagc 18

<210> 1874
<211> 20
<212> DNA
<213> synthetic construct

<400> 1874
gcgataagtt ttcgatttca 20

<210> 1875
<211> 18
<212> DNA
<213> synthetic construct

<400> 1875
gctgaccgat ccgttttt 18

<210> 1876
<211> 20
<212> DNA
<213> synthetic construct

<400> 1876
atgtcatggt tccgatactg 20

<210> 1877
<211> 20
<212> DNA
<213> synthetic construct

<400> 1877
ctttatcaag cggatactgg 20

<210> 1878
<211> 20
<212> DNA
<213> synthetic construct

<400> 1878
aagctggaac gtactaacga 20

<210> 1879
<211> 20
<212> DNA
<213> synthetic construct

<400> 1879
taatcactgc ggctaataca 20

<210> 1880
<211> 19
<212> DNA
<213> synthetic construct

<400> 1880
acaggatagc gaacacctc 19

<210> 1881
<211> 18
<212> DNA
<213> synthetic construct

<400> 1881
aaagccagct ccgtttag 18

<210> 1882
<211> 20
<212> DNA
<213> synthetic construct

<400> 1882
atccataccc tgacactcaa 20

<210> 1883
<211> 18
<212> DNA
<213> synthetic construct

<400> 1883

gatcaacaaa ggccgtaa 18

<210> 1884
<211> 19
<212> DNA
<213> synthetic construct

<400> 1884
gcttcaggtg ttgaaaatg 19

<210> 1885
<211> 20
<212> DNA
<213> synthetic construct

<400> 1885
agcagcagca taaaataacc 20

<210> 1886
<211> 20
<212> DNA
<213> synthetic construct

<400> 1886
caagcacaac aagaaatacg 20

<210> 1887
<211> 19
<212> DNA
<213> synthetic construct

<400> 1887
tagacctccg aagagttgc 19

<210> 1888
<211> 18
<212> DNA
<213> synthetic construct

<400> 1888
gagcgacctt ggattctc 18

<210> 1889
<211> 20
<212> DNA
<213> synthetic construct

<400> 1889
ataagaccca aattaacggc 20

<210> 1890
<211> 18
<212> DNA
<213> synthetic construct

<400> 1890
atggatgctc gggtactg 18

<210> 1891
<211> 18
<212> DNA
<213> synthetic construct

<400> 1891
ctcagctaca gccacgac 18

<210> 1892
<211> 18
<212> DNA
<213> synthetic construct

<400> 1892
gatcgtctct gcccagtc 18

<210> 1893
<211> 18
<212> DNA
<213> synthetic construct

<400> 1893
acattgatgg tgtcgtcc 18

<210> 1894
<211> 19
<212> DNA
<213> synthetic construct

<400> 1894
aggagagaac atgagtcgc 19

<210> 1895
<211> 20
<212> DNA
<213> synthetic construct

<400> 1895
tccttgtccc agtagttacc 20

<210> 1896

<211> 18
<212> DNA
<213> synthetic construct

<400> 1896
aggagcaact gaagcgac 18

<210> 1897
<211> 18
<212> DNA
<213> synthetic construct

<400> 1897
tctgccttta cccaggac 18

<210> 1898
<211> 18
<212> DNA
<213> synthetic construct

<400> 1898
aaggttggca ggatcaac 18

<210> 1899
<211> 20
<212> DNA
<213> synthetic construct

<400> 1899
ctagtggcga aattgaacag 20

<210> 1900
<211> 18
<212> DNA
<213> synthetic construct

<400> 1900
aggcatccat cgagctac 18

<210> 1901
<211> 18
<212> DNA
<213> synthetic construct

<400> 1901
aacgtccgag caggatac 18

<210> 1902
<211> 18
<212> DNA

<213> synthetic construct

<400> 1902
gcgaggaggt attcgaca 18

<210> 1903
<211> 19
<212> DNA
<213> synthetic construct

<400> 1903
cccttctgcg agtagtgtt 19

<210> 1904
<211> 18
<212> DNA
<213> synthetic construct

<400> 1904
aaggacttct ggtcggtg 18

<210> 1905
<211> 19
<212> DNA
<213> synthetic construct

<400> 1905
caggaacagg tgctcgtag 19

<210> 1906
<211> 19
<212> DNA
<213> synthetic construct

<400> 1906
ttccctaacg aatgctgtc 19

<210> 1907
<211> 18
<212> DNA
<213> synthetic construct

<400> 1907
cgttgctccc tcatacac 18

<210> 1908
<211> 18
<212> DNA
<213> synthetic construct

<400> 1908
cgagcaccaa tatcgaac 18

<210> 1909
<211> 18
<212> DNA
<213> synthetic construct

<400> 1909
gagccgtagg tgttatcg 18

<210> 1910
<211> 20
<212> DNA
<213> synthetic construct

<400> 1910
gctttacctt gatcgaactg 20

<210> 1911
<211> 20
<212> DNA
<213> synthetic construct

<400> 1911
tcaatagagc cagtcacacc 20

<210> 1912
<211> 18
<212> DNA
<213> synthetic construct

<400> 1912
tgccgtgagt gaaatcag 18

<210> 1913
<211> 19
<212> DNA
<213> synthetic construct

<400> 1913
cgtagttggc tttccagtt 19

<210> 1914
<211> 21
<212> DNA
<213> synthetic construct

<400> 1914
ggtatcaacc cactaaaggt c 21

<210> 1915
<211> 20
<212> DNA
<213> synthetic construct

<400> 1915
gtccagagct tctaccagag 20

<210> 1916
<211> 18
<212> DNA
<213> synthetic construct

<400> 1916
gaagtgaact ccgccaag 18

<210> 1917
<211> 20
<212> DNA
<213> synthetic construct

<400> 1917
tcgagcatca tcaggtagac 20

<210> 1918
<211> 20
<212> DNA
<213> synthetic construct

<400> 1918
tcgagaagtc gatgttcaag 20

<210> 1919
<211> 18
<212> DNA
<213> synthetic construct

<400> 1919
cttgccgtag tgatgcag 18

<210> 1920
<211> 20
<212> DNA
<213> synthetic construct

<400> 1920
agacctacaa caaggtttcg 20

<210> 1921
<211> 18
<212> DNA
<213> synthetic construct

<400> 1921
tgaggatagt cccttcgc 18

<210> 1922
<211> 19
<212> DNA
<213> synthetic construct

<400> 1922
attcctctct gaatcgctg 19

<210> 1923
<211> 20
<212> DNA
<213> synthetic construct

<400> 1923
aatatcttca tcgccagttg 20

<210> 1924
<211> 18
<212> DNA
<213> synthetic construct

<400> 1924
aggaatgacg gaggcttt 18

<210> 1925
<211> 18
<212> DNA
<213> synthetic construct

<400> 1925
gggttggaca tcagcatc 18

<210> 1926
<211> 18
<212> DNA
<213> synthetic construct

<400> 1926
ttcaacctca acggactg 18

<210> 1927
<211> 18

<212> DNA
<213> synthetic construct

<400> 1927
tgcaaggtac tcaccagc 18

<210> 1928
<211> 18
<212> DNA
<213> synthetic construct

<400> 1928
cattgaaagg tcgtagcg 18

<210> 1929
<211> 18
<212> DNA
<213> synthetic construct

<400> 1929
cgacgaagtg gatattgg 18

<210> 1930
<211> 19
<212> DNA
<213> synthetic construct

<400> 1930
ggtcaagcac atcctagtg 19

<210> 1931
<211> 18
<212> DNA
<213> synthetic construct

<400> 1931
acttccttgc ggtactcc 18

<210> 1932
<211> 19
<212> DNA
<213> synthetic construct

<400> 1932
ccgaaggact tggtttact 19

<210> 1933
<211> 18
<212> DNA
<213> synthetic construct

<400> 1933
ctatggaagg tgcctgtg 18

<210> 1934
<211> 19
<212> DNA
<213> synthetic construct

<400> 1934
cactttccgt tattgcctc 19

<210> 1935
<211> 18
<212> DNA
<213> synthetic construct

<400> 1935
gaggatgagg atgttggc 18

<210> 1936
<211> 18
<212> DNA
<213> synthetic construct

<400> 1936
gactggctga atcgtctc 18

<210> 1937
<211> 18
<212> DNA
<213> synthetic construct

<400> 1937
gcaggtcgta ccaggaag 18

<210> 1938
<211> 19
<212> DNA
<213> synthetic construct

<400> 1938
attgtcgatg acgaacctc 19

<210> 1939
<211> 20
<212> DNA
<213> synthetic construct

<400> 1939

ttcaggtaga gctggaaatg 20

<210> 1940
<211> 18
<212> DNA
<213> synthetic construct

<400> 1940
cgtttgggac agattgag 18

<210> 1941
<211> 19
<212> DNA
<213> synthetic construct

<400> 1941
gatactctgc tgacctcgc 19

<210> 1942
<211> 18
<212> DNA
<213> synthetic construct

<400> 1942
aatgcgataa ccatcagc 18

<210> 1943
<211> 18
<212> DNA
<213> synthetic construct

<400> 1943
ccgtcgtact ggaagttg 18

<210> 1944
<211> 19
<212> DNA
<213> synthetic construct

<400> 1944
ctgggacgtt agtgtcatc 19

<210> 1945
<211> 18
<212> DNA
<213> synthetic construct

<400> 1945
gtcttggcat tgagttcg 18

<210> 1946
<211> 18
<212> DNA
<213> synthetic construct

<400> 1946
aagaagtctc tgctcccc 18

<210> 1947
<211> 18
<212> DNA
<213> synthetic construct

<400> 1947
acgatttcct ccacctgt 18

<210> 1948
<211> 18
<212> DNA
<213> synthetic construct

<400> 1948
atggcagttt cagtgtcg 18

<210> 1949
<211> 18
<212> DNA
<213> synthetic construct

<400> 1949
cgaaatagtc gtccagcc 18

<210> 1950
<211> 18
<212> DNA
<213> synthetic construct

<400> 1950
aatgtcggca tcattctc 18

<210> 1951
<211> 18
<212> DNA
<213> synthetic construct

<400> 1951
gtagacctcg cgcttgaa 18

<210> 1952

<211> 18
<212> DNA
<213> synthetic construct

<400> 1952
gacctgctgt tccagttg 18

<210> 1953
<211> 18
<212> DNA
<213> synthetic construct

<400> 1953
aattcacggg ttttctcg 18

<210> 1954
<211> 20
<212> DNA
<213> synthetic construct

<400> 1954
cctgctcaac accttctatc 20

<210> 1955
<211> 18
<212> DNA
<213> synthetic construct

<400> 1955
gtcgaacaac gcgaacag 18

<210> 1956
<211> 19
<212> DNA
<213> synthetic construct

<400> 1956
gttgaaaggg tttaccgac 19

<210> 1957
<211> 18
<212> DNA
<213> synthetic construct

<400> 1957
aatttctgca tcgggttc 18

<210> 1958
<211> 20
<212> DNA

<213> synthetic construct

<400> 1958
atgctcgata atgctattcc 20

<210> 1959
<211> 19
<212> DNA
<213> synthetic construct

<400> 1959
ttctcgtagt aaccctcgg 19

<210> 1960
<211> 19
<212> DNA
<213> synthetic construct

<400> 1960
gacttcgctg ttcgacttc 19

<210> 1961
<211> 18
<212> DNA
<213> synthetic construct

<400> 1961
tcggttcgag ttcatagc 18

<210> 1962
<211> 18
<212> DNA
<213> synthetic construct

<400> 1962
gtgttccagg tgttcgac 18

<210> 1963
<211> 20
<212> DNA
<213> synthetic construct

<400> 1963
gatagacgtt gtccttgacc 20

<210> 1964
<211> 19
<212> DNA
<213> synthetic construct

<400> 1964
acaacctgga acagcaact 19

<210> 1965
<211> 18
<212> DNA
<213> synthetic construct

<400> 1965
cgactcttgc gcgtattc 18

<210> 1966
<211> 18
<212> DNA
<213> synthetic construct

<400> 1966
gtcaagggtg ttgtctgc 18

<210> 1967
<211> 18
<212> DNA
<213> synthetic construct

<400> 1967
ctctgcacaa actcaggg 18

<210> 1968
<211> 20
<212> DNA
<213> synthetic construct

<400> 1968
aagtcggtac tggagtcctt 20

<210> 1969
<211> 18
<212> DNA
<213> synthetic construct

<400> 1969
tcagcacatc atggaaca 18

<210> 1970
<211> 18
<212> DNA
<213> synthetic construct

<400> 1970
cttcagttcc gagatgcc 18

<210> 1971
<211> 18
<212> DNA
<213> synthetic construct

<400> 1971
gtaacgaacg ctatcggg 18

<210> 1972
<211> 25
<212> DNA
<213> synthetic construct

<400> 1972
atatacggaa aaagagtttc ttgag 25

<210> 1973
<211> 21
<212> DNA
<213> synthetic construct

<400> 1973
agcacgccat tctttaactt c 21

<210> 1974
<211> 20
<212> DNA
<213> synthetic construct

<400> 1974
tatacggctt cagactttcc 20

<210> 1975
<211> 18
<212> DNA
<213> synthetic construct

<400> 1975
tggcataagt attggcag 18

<210> 1976
<211> 20
<212> DNA
<213> synthetic construct

<400> 1976
atccagtata ttcctgctcg 20

<210> 1977
<211> 20
<212> DNA
<213> synthetic construct

<400> 1977
tgcaatttct tcttattggc 20

<210> 1978
<211> 20
<212> DNA
<213> synthetic construct

<400> 1978
tcgccaataa gaagaaattg 20

<210> 1979
<211> 20
<212> DNA
<213> synthetic construct

<400> 1979
agtggtactc gaagggttct 20

<210> 1980
<211> 19
<212> DNA
<213> synthetic construct

<400> 1980
atcgttctgg tcttccttg 19

<210> 1981
<211> 20
<212> DNA
<213> synthetic construct

<400> 1981
accaaagagt gttgatagcc 20

<210> 1982
<211> 20
<212> DNA
<213> synthetic construct

<400> 1982
agtctgttgg tatcggtttg 20

<210> 1983
<211> 18

<212> DNA
<213> synthetic construct

<400> 1983
ctccaggtcg aggaaatg 18

<210> 1984
<211> 18
<212> DNA
<213> synthetic construct

<400> 1984
aacgctttct cgatcagg 18

<210> 1985
<211> 18
<212> DNA
<213> synthetic construct

<400> 1985
gatactgtgc ggttgtga 18

<210> 1986
<211> 20
<212> DNA
<213> synthetic construct

<400> 1986
ttcgattact acgcctatgg 20

<210> 1987
<211> 18
<212> DNA
<213> synthetic construct

<400> 1987
ggtccattgc aggatctc 18

<210> 1988
<211> 20
<212> DNA
<213> synthetic construct

<400> 1988
cccctattcc ataccttacc 20

<210> 1989
<211> 20
<212> DNA
<213> synthetic construct

<400> 1989
tattgaggac gctgattttc 20

<210> 1990
<211> 18
<212> DNA
<213> synthetic construct

<400> 1990
gtgcgctaca gctacacg 18

<210> 1991
<211> 18
<212> DNA
<213> synthetic construct

<400> 1991
cttgccttcc caggtatc 18

<210> 1992
<211> 19
<212> DNA
<213> synthetic construct

<400> 1992
actcttggct tgattttgg 19

<210> 1993
<211> 20
<212> DNA
<213> synthetic construct

<400> 1993
ttgaagtccc atctcttttc 20

<210> 1994
<211> 23
<212> DNA
<213> synthetic construct

<400> 1994
aaatattgtt ggtttacttc gtg 23

<210> 1995
<211> 21
<212> DNA
<213> synthetic construct

<400> 1995

tcataatttc atctcccttg a 21

<210> 1996
<211> 21
<212> DNA
<213> synthetic construct

<400> 1996
ctaaagcatt tggagagatt g 21

<210> 1997
<211> 20
<212> DNA
<213> synthetic construct

<400> 1997
tggattctat tcgctactcc 20

<210> 1998
<211> 21
<212> DNA
<213> synthetic construct

<400> 1998
tgtaggaact gatttggatg a 21

<210> 1999
<211> 20
<212> DNA
<213> synthetic construct

<400> 1999
ccataactcc cttaacagca 20

<210> 2000
<211> 20
<212> DNA
<213> synthetic construct

<400> 2000
tttccagaca taaaccatcc 20

<210> 2001
<211> 20
<212> DNA
<213> synthetic construct

<400> 2001
ggcatttcta atcatccaag 20

<210> 2002
<211> 20
<212> DNA
<213> synthetic construct

<400> 2002
tcgtcatctg tactggtctg 20

<210> 2003
<211> 22
<212> DNA
<213> synthetic construct

<400> 2003
ctcgtctact gacttgaact tg 22

<210> 2004
<211> 20
<212> DNA
<213> synthetic construct

<400> 2004
gtggaaatct gctggtaaag 20

<210> 2005
<211> 20
<212> DNA
<213> synthetic construct

<400> 2005
gctcattcat ctcctcaaag 20

<210> 2006
<211> 20
<212> DNA
<213> synthetic construct

<400> 2006
gattatcgga gaaattcgtg 20

<210> 2007
<211> 21
<212> DNA
<213> synthetic construct

<400> 2007
gatagtctcc accagatgaa a 21

<210> 2008

<211> 18
<212> DNA
<213> synthetic construct

<400> 2008
tggacaagca gtgtgtga 18

<210> 2009
<211> 20
<212> DNA
<213> synthetic construct

<400> 2009
taggtctgca caaagattcc 20

<210> 2010
<211> 22
<212> DNA
<213> synthetic construct

<400> 2010
aaaaatgatg acattcttga aa 22

<210> 2011
<211> 23
<212> DNA
<213> synthetic construct

<400> 2011
ttaatcattg actttacgat ttg 23

<210> 2012
<211> 19
<212> DNA
<213> synthetic construct

<400> 2012
atgctggaaa gtctcttgg 19

<210> 2013
<211> 20
<212> DNA
<213> synthetic construct

<400> 2013
tttgtttcct taatgcgttt 20

<210> 2014
<211> 20
<212> DNA

<213> synthetic construct

<400> 2014
ggctgtagga gacaatgaag 20

<210> 2015
<211> 22
<212> DNA
<213> synthetic construct

<400> 2015
ctttgttgac agacgtagag tg 22

<210> 2016
<211> 24
<212> DNA
<213> synthetic construct

<400> 2016
ttgttagaga gacagaactt gaac 24

<210> 2017
<211> 20
<212> DNA
<213> synthetic construct

<400> 2017
agatcgacaa acacctcatc 20

<210> 2018
<211> 27
<212> DNA
<213> synthetic construct

<400> 2018
aatattttat ccatgttatt atcctac 27

<210> 2019
<211> 20
<212> DNA
<213> synthetic construct

<400> 2019
gtcggagcat caattctatc 20

<210> 2020
<211> 20
<212> DNA
<213> synthetic construct

<400> 2020
tgagggattt attcaggatg 20

<210> 2021
<211> 23
<212> DNA
<213> synthetic construct

<400> 2021
ttaaaaaggt tactgatttc cac 23

<210> 2022
<211> 22
<212> DNA
<213> synthetic construct

<400> 2022
tgctttaact cttttaccaa cc 22

<210> 2023
<211> 21
<212> DNA
<213> synthetic construct

<400> 2023
tggacagaaa attccaataa g 21

<210> 2024
<211> 20
<212> DNA
<213> synthetic construct

<400> 2024
aaggcaattc caatacaaag 20

<210> 2025
<211> 20
<212> DNA
<213> synthetic construct

<400> 2025
gatggtgcaa gaccttaatc 20

<210> 2026
<211> 18
<212> DNA
<213> synthetic construct

<400> 2026
tttcaatgcc tctcttgg 18

<210> 2027
<211> 19
<212> DNA
<213> synthetic construct

<400> 2027
tcccagctat caagcctac 19

<210> 2028
<211> 22
<212> DNA
<213> synthetic construct

<400> 2028
tccattagtc aatgagttga aa 22

<210> 2029
<211> 25
<212> DNA
<213> synthetic construct

<400> 2029
gtcacataaa cattctctct acctt 25

<210> 2030
<211> 20
<212> DNA
<213> synthetic construct

<400> 2030
gaagcatacg acaaacttcc 20

<210> 2031
<211> 20
<212> DNA
<213> synthetic construct

<400> 2031
tcaggtagcg atcatactcc 20

<210> 2032
<211> 21
<212> DNA
<213> synthetic construct

<400> 2032
gtgatagtga acttgggatt g 21

<210> 2033
<211> 20
<212> DNA
<213> synthetic construct

<400> 2033
aacgccagta aagagatgac 20

<210> 2034
<211> 18
<212> DNA
<213> synthetic construct

<400> 2034
agagcaaaaa cgctggtt 18

<210> 2035
<211> 22
<212> DNA
<213> synthetic construct

<400> 2035
tagtaattcc acacagaaag ca 22

<210> 2036
<211> 20
<212> DNA
<213> synthetic construct

<400> 2036
acgaacagtg gacctgatac 20

<210> 2037
<211> 20
<212> DNA
<213> synthetic construct

<400> 2037
taaaccttgc gaaataatgg 20

<210> 2038
<211> 20
<212> DNA
<213> synthetic construct

<400> 2038
ttgtcttgac tggttgtgtc 20

<210> 2039
<211> 20

<212> DNA
<213> synthetic construct

<400> 2039
ctactccgtg aagtgaaagg 20

<210> 2040
<211> 21
<212> DNA
<213> synthetic construct

<400> 2040
tgcaaaaggt tagaatgatt g 21

<210> 2041
<211> 21
<212> DNA
<213> synthetic construct

<400> 2041
aagtcagagt agggaggaaa g 21

<210> 2042
<211> 20
<212> DNA
<213> synthetic construct

<400> 2042
gttcggtaat ccagttgaag 20

<210> 2043
<211> 20
<212> DNA
<213> synthetic construct

<400> 2043
ttaacagacg cagtcaagag 20

<210> 2044
<211> 22
<212> DNA
<213> synthetic construct

<400> 2044
cgtggaaatt ttagaagaac tc 22

<210> 2045
<211> 20
<212> DNA
<213> synthetic construct

<400> 2045
caaggactgg tttttctttg 20

<210> 2046
<211> 19
<212> DNA
<213> synthetic construct

<400> 2046
aaaatttggg ggattcagt 19

<210> 2047
<211> 20
<212> DNA
<213> synthetic construct

<400> 2047
tcataagcag cagtaaccaa 20

<210> 2048
<211> 20
<212> DNA
<213> synthetic construct

<400> 2048
cctctaaggc tatgatggaa 20

<210> 2049
<211> 20
<212> DNA
<213> synthetic construct

<400> 2049
ctattaaggg attgcgtttg 20

<210> 2050
<211> 20
<212> DNA
<213> synthetic construct

<400> 2050
tgaaagatgg acgagatagg 20

<210> 2051
<211> 20
<212> DNA
<213> synthetic construct

<400> 2051

gatgggctag gtaagatttg 20

<210> 2052
<211> 19
<212> DNA
<213> synthetic construct

<400> 2052
tacatggatg ctgttggag 19

<210> 2053
<211> 24
<212> DNA
<213> synthetic construct

<400> 2053
gatctaggat ggcaagaata taag 24

<210> 2054
<211> 24
<212> DNA
<213> synthetic construct

<400> 2054
catatggtac atttgattta ttgc 24

<210> 2055
<211> 26
<212> DNA
<213> synthetic construct

<400> 2055
gtgtcaatat ggtagtcttt aacatc 26

<210> 2056
<211> 22
<212> DNA
<213> synthetic construct

<400> 2056
ctcctagtgc cctatatctt tg 22

<210> 2057
<211> 18
<212> DNA
<213> synthetic construct

<400> 2057
tacgatgatt ggccttga 18

<210> 2058
<211> 18
<212> DNA
<213> synthetic construct

<400> 2058
cttggtgcac agagtcct 18

<210> 2059
<211> 20
<212> DNA
<213> synthetic construct

<400> 2059
ttttcgtcat tcatttttga 20

<210> 2060
<211> 20
<212> DNA
<213> synthetic construct

<400> 2060
aagtaggcga tggttatgtc 20

<210> 2061
<211> 20
<212> DNA
<213> synthetic construct

<400> 2061
tatttcctga atcctgatgg 20

<210> 2062
<211> 21
<212> DNA
<213> synthetic construct

<400> 2062
gcatctctcg ttatgtcttt g 21

<210> 2063
<211> 20
<212> DNA
<213> synthetic construct

<400> 2063
tttggagctt tgtatgtgtg 20

<210> 2064

<211> 24
<212> DNA
<213> synthetic construct

<400> 2064
gaccattacc actttattcc ttac 24

<210> 2065
<211> 20
<212> DNA
<213> synthetic construct

<400> 2065
tttgctcttc tgtcaagtcc 20

<210> 2066
<211> 21
<212> DNA
<213> synthetic construct

<400> 2066
tttcatttct tatttcctcc a 21

<210> 2067
<211> 20
<212> DNA
<213> synthetic construct

<400> 2067
gcttattcac aggctcattt 20

<210> 2068
<211> 21
<212> DNA
<213> synthetic construct

<400> 2068
gatttctgta tgaggcagtt c 21

<210> 2069
<211> 19
<212> DNA
<213> synthetic construct

<400> 2069
cttcctagcg tccaatacc 19

<210> 2070
<211> 20
<212> DNA

<213> synthetic construct

<400> 2070
ggctgttagt ccaagtcaag 20

<210> 2071
<211> 20
<212> DNA
<213> synthetic construct

<400> 2071
gctacctgta accattgctc 20

<210> 2072
<211> 19
<212> DNA
<213> synthetic construct

<400> 2072
cttgtgctgt tcttcgttg 19

<210> 2073
<211> 18
<212> DNA
<213> synthetic construct

<400> 2073
cttgcgctac cgtggttt 18

<210> 2074
<211> 23
<212> DNA
<213> synthetic construct

<400> 2074
ttgatatcca acaactacaa aaa 23

<210> 2075
<211> 23
<212> DNA
<213> synthetic construct

<400> 2075
agctttttgg tattcatcta cag 23

<210> 2076
<211> 24
<212> DNA
<213> synthetic construct

<400> 2076
aggaaacaga aaataaagag aaac 24

<210> 2077
<211> 20
<212> DNA
<213> synthetic construct

<400> 2077
caaacggagc attgatagac 20

<210> 2078
<211> 21
<212> DNA
<213> synthetic construct

<400> 2078
cattgaaacc aggagaaaag g 21

<210> 2079
<211> 26
<212> DNA
<213> synthetic construct

<400> 2079
tttttactct caactttctc ttttgc 26

<210> 2080
<211> 22
<212> DNA
<213> synthetic construct

<400> 2080
aaaagcgaaa gttaagagtg aa 22

<210> 2081
<211> 18
<212> DNA
<213> synthetic construct

<400> 2081
ggatgggctt ggaagagt 18

<210> 2082
<211> 20
<212> DNA
<213> synthetic construct

<400> 2082
aagatattgc caacctcaac 20

<210> 2083
<211> 21
<212> DNA
<213> synthetic construct

<400> 2083
ggttatgacc gtagcaacta a 21

<210> 2084
<211> 21
<212> DNA
<213> synthetic construct

<400> 2084
gcttgtatga cgatagagga g 21

<210> 2085
<211> 19
<212> DNA
<213> synthetic construct

<400> 2085
tagctcagtc agaccacga 19

<210> 2086
<211> 19
<212> DNA
<213> synthetic construct

<400> 2086
ttgtagggct aggaacagg 19

<210> 2087
<211> 20
<212> DNA
<213> synthetic construct

<400> 2087
aatctgaact ccatctcgtc 20

<210> 2088
<211> 18
<212> DNA
<213> synthetic construct

<400> 2088
atgacgcgct atgctttg 18

<210> 2089
<211> 27
<212> DNA
<213> synthetic construct

<400> 2089
ataggcagtc ttagaatagg attcttc 27

<210> 2090
<211> 21
<212> DNA
<213> synthetic construct

<400> 2090
aaccatgtat tgaggaaagt g 21

<210> 2091
<211> 22
<212> DNA
<213> synthetic construct

<400> 2091
tggaagtttg tatgagtgac ag 22

<210> 2092
<211> 21
<212> DNA
<213> synthetic construct

<400> 2092
ggacttcctt ttcttatcca g 21

<210> 2093
<211> 20
<212> DNA
<213> synthetic construct

<400> 2093
cagtccatag aggctgtttt 20

<210> 2094
<211> 20
<212> DNA
<213> synthetic construct

<400> 2094
tttgcagatt tgtgagattg 20

<210> 2095
<211> 20

<212> DNA
<213> synthetic construct

<400> 2095
tacgtttaca gatgctacgg 20

<210> 2096
<211> 20
<212> DNA
<213> synthetic construct

<400> 2096
aatagcagta gcagggacag 20

<210> 2097
<211> 20
<212> DNA
<213> synthetic construct

<400> 2097
tgctccgtat ctctcaaatc 20

<210> 2098
<211> 25
<212> DNA
<213> synthetic construct

<400> 2098
atgaatttaa catttttagg cttat 25

<210> 2099
<211> 27
<212> DNA
<213> synthetic construct

<400> 2099
tatttgataa taaatgagaa gacaaga 27

<210> 2100
<211> 25
<212> DNA
<213> synthetic construct

<400> 2100
atgagtgaaa taggctttaa ataca 25

<210> 2101
<211> 24
<212> DNA
<213> synthetic construct

<400> 2101
caccttgcca agatatttac tatt 24

<210> 2102
<211> 21
<212> DNA
<213> synthetic construct

<400> 2102
ttgcacttta tatcctccat t 21

<210> 2103
<211> 20
<212> DNA
<213> synthetic construct

<400> 2103
gttacatcaa ttcccatcgt 20

<210> 2104
<211> 18
<212> DNA
<213> synthetic construct

<400> 2104
aagtaggggc tttcttgc 18

<210> 2105
<211> 23
<212> DNA
<213> synthetic construct

<400> 2105
aactttcttt cttaccacta ccc 23

<210> 2106
<211> 25
<212> DNA
<213> synthetic construct

<400> 2106
taacgagatt attacaaaac aaaac 25

<210> 2107
<211> 20
<212> DNA
<213> synthetic construct

<400> 2107

tctttaggct ggaatgtgtc 20

<210> 2108
<211> 19
<212> DNA
<213> synthetic construct

<400> 2108
gaaagaattg ggtgcaaag 19

<210> 2109
<211> 20
<212> DNA
<213> synthetic construct

<400> 2109
tcatcctcac cattaccaac 20

<210> 2110
<211> 21
<212> DNA
<213> synthetic construct

<400> 2110
gcttccatca aatcacttta c 21

<210> 2111
<211> 19
<212> DNA
<213> synthetic construct

<400> 2111
gtgcaacatt actgccttc 19

<210> 2112
<211> 20
<212> DNA
<213> synthetic construct

<400> 2112
tggaagacct ttatcctgtc 20

<210> 2113
<211> 26
<212> DNA
<213> synthetic construct

<400> 2113
aaaatagtta atagcagtaa aacctg 26

<210> 2114
<211> 22
<212> DNA
<213> synthetic construct

<400> 2114
ctataatggt gagcgatatt tg 22

<210> 2115
<211> 20
<212> DNA
<213> synthetic construct

<400> 2115
agaacaacac cttcccatac 20

<210> 2116
<211> 18
<212> DNA
<213> synthetic construct

<400> 2116
cgtatcaagt cggcattt 18

<210> 2117
<211> 23
<212> DNA
<213> synthetic construct

<400> 2117
gcaatttatc aaagttatca tcc 23

<210> 2118
<211> 18
<212> DNA
<213> synthetic construct

<400> 2118
ggatatgcca gcaaaaac 18

<210> 2119
<211> 19
<212> DNA
<213> synthetic construct

<400> 2119
tgtcaaaatc tggaacgag 19

<210> 2120

<211> 18
<212> DNA
<213> synthetic construct

<400> 2120
atcaacgact tccaccaa 18

<210> 2121
<211> 22
<212> DNA
<213> synthetic construct

<400> 2121
aatatttacg caaggtttca ag 22

<210> 2122
<211> 25
<212> DNA
<213> synthetic construct

<400> 2122
agattacact tttacagcta tctcc 25

<210> 2123
<211> 20
<212> DNA
<213> synthetic construct

<400> 2123
tcaactccct tccataaatc 20

<210> 2124
<211> 20
<212> DNA
<213> synthetic construct

<400> 2124
tctggactct cgataattgg 20

<210> 2125
<211> 19
<212> DNA
<213> synthetic construct

<400> 2125
aggagaacac accaggaag 19

<210> 2126
<211> 24
<212> DNA

<213> synthetic construct

<400> 2126
acatttgtta tagtttcctt gttg 24

<210> 2127
<211> 23
<212> DNA
<213> synthetic construct

<400> 2127
tttggtaagt tgagatttag gac 23

<210> 2128
<211> 20
<212> DNA
<213> synthetic construct

<400> 2128
ttttaaccca ccaagttgac 20

<210> 2129
<211> 20
<212> DNA
<213> synthetic construct

<400> 2129
gataccgata gcttggactg 20

<210> 2130
<211> 19
<212> DNA
<213> synthetic construct

<400> 2130
gtggatgctc aagaaactg 19

<210> 2131
<211> 21
<212> DNA
<213> synthetic construct

<400> 2131
cttatgttcg gctaattgtt c 21

<210> 2132
<211> 19
<212> DNA
<213> synthetic construct

<400> 2132
attatcactg gcggaaaga 19

<210> 2133
<211> 20
<212> DNA
<213> synthetic construct

<400> 2133
gataagagcc gtctgaatgt 20

<210> 2134
<211> 19
<212> DNA
<213> synthetic construct

<400> 2134
aatggaatga acggaagtg 19

<210> 2135
<211> 21
<212> DNA
<213> synthetic construct

<400> 2135
tgttctctct ttttccctag c 21

<210> 2136
<211> 20
<212> DNA
<213> synthetic construct

<400> 2136
ggtcaactgt ccatatctcc 20

<210> 2137
<211> 22
<212> DNA
<213> synthetic construct

<400> 2137
gactgatttc accaatactt cc 22

<210> 2138
<211> 18
<212> DNA
<213> synthetic construct

<400> 2138
agtcgcacta gccacatt 18

<210> 2139
<211> 19
<212> DNA
<213> synthetic construct

<400> 2139
gagaatcaaa gccaccatc 19

<210> 2140
<211> 20
<212> DNA
<213> synthetic construct

<400> 2140
atttcgagtg ttgcttatgg 20

<210> 2141
<211> 20
<212> DNA
<213> synthetic construct

<400> 2141
gtaaagtgag ccgtcaaatc 20

<210> 2142
<211> 20
<212> DNA
<213> synthetic construct

<400> 2142
gggtaactat gcgacttctg 20

<210> 2143
<211> 20
<212> DNA
<213> synthetic construct

<400> 2143
agctttacac catcatctcc 20

<210> 2144
<211> 21
<212> DNA
<213> synthetic construct

<400> 2144
gatcaacaag ctgaagaaga c 21

<210> 2145
<211> 18
<212> DNA
<213> synthetic construct

<400> 2145
catctttcac ccaacctg 18

<210> 2146
<211> 21
<212> DNA
<213> synthetic construct

<400> 2146
gtgtcagcac aaattacgat t 21

<210> 2147
<211> 18
<212> DNA
<213> synthetic construct

<400> 2147
tcgtcactca ccttggaa 18

<210> 2148
<211> 20
<212> DNA
<213> synthetic construct

<400> 2148
tgttcggatt gagctagaag 20

<210> 2149
<211> 19
<212> DNA
<213> synthetic construct

<400> 2149
taattttacg gtggggttg 19

<210> 2150
<211> 22
<212> DNA
<213> synthetic construct

<400> 2150
atctgtagaa ggtcttggtt tc 22

<210> 2151
<211> 23

<212> DNA
<213> synthetic construct

<400> 2151
attctaaatc acctgaactc ttg 23

<210> 2152
<211> 21
<212> DNA
<213> synthetic construct

<400> 2152
atttgtgagg atcttgttga g 21

<210> 2153
<211> 23
<212> DNA
<213> synthetic construct

<400> 2153
ggtattcttc tctatcaaac tgg 23

<210> 2154
<211> 21
<212> DNA
<213> synthetic construct

<400> 2154
caacttctga ttatgccttt g 21

<210> 2155
<211> 19
<212> DNA
<213> synthetic construct

<400> 2155
tcctaatgtc cgtccaatc 19

<210> 2156
<211> 24
<212> DNA
<213> synthetic construct

<400> 2156
agtggaacta tgtgtttaat cttg 24

<210> 2157
<211> 20
<212> DNA
<213> synthetic construct

<400> 2157
gatgtcagca accatcctac 20

<210> 2158
<211> 23
<212> DNA
<213> synthetic construct

<400> 2158
aaagaaacac tcacatacac ctc 23

<210> 2159
<211> 22
<212> DNA
<213> synthetic construct

<400> 2159
aaaccatagc ttgactatca cc 22

<210> 2160
<211> 18
<212> DNA
<213> synthetic construct

<400> 2160
taaacacgaa gcggaaaa 18

<210> 2161
<211> 22
<212> DNA
<213> synthetic construct

<400> 2161
tcaataaaaa gttggttagc ac 22

<210> 2162
<211> 20
<212> DNA
<213> synthetic construct

<400> 2162
taatcacatt tgttgccatt 20

<210> 2163
<211> 23
<212> DNA
<213> synthetic construct

<400> 2163

catccaaaat acccataata act 23

<210> 2164
<211> 23
<212> DNA
<213> synthetic construct

<400> 2164
cgtacaaaca tacagtttag tgg 23

<210> 2165
<211> 20
<212> DNA
<213> synthetic construct

<400> 2165
tccataatcg ccgtaagtag 20

<210> 2166
<211> 19
<212> DNA
<213> synthetic construct

<400> 2166
tttggagtcg tggctatct 19

<210> 2167
<211> 22
<212> DNA
<213> synthetic construct

<400> 2167
gctaagtgcc tctacattaa ca 22

<210> 2168
<211> 22
<212> DNA
<213> synthetic construct

<400> 2168
tgatcaagaa gtgttcattc aa 22

<210> 2169
<211> 26
<212> DNA
<213> synthetic construct

<400> 2169
ttatgacaaa acatatcatt atttcc 26

<210> 2170
<211> 23
<212> DNA
<213> synthetic construct

<400> 2170
tgaggtttga tgagaactta aaa 23

<210> 2171
<211> 25
<212> DNA
<213> synthetic construct

<400> 2171
atccctttaa tgataagtat ttgac 25

<210> 2172
<211> 20
<212> DNA
<213> synthetic construct

<400> 2172
gggttgtcag aagctagaaa 20

<210> 2173
<211> 20
<212> DNA
<213> synthetic construct

<400> 2173
ttattcgctc gtctaatgct 20

<210> 2174
<211> 20
<212> DNA
<213> synthetic construct

<400> 2174
tattcttggg tggttctgtc 20

<210> 2175
<211> 20
<212> DNA
<213> synthetic construct

<400> 2175
agtggacgaa tgtgttatcc 20

<210> 2176

<211> 20
<212> DNA
<213> synthetic construct

<400> 2176
tacactcggg aatttattgg 20

<210> 2177
<211> 20
<212> DNA
<213> synthetic construct

<400> 2177
aatcaaggga acagacacag 20

<210> 2178
<211> 24
<212> DNA
<213> synthetic construct

<400> 2178
tcaggactgt ttatttttat gatt 24

<210> 2179
<211> 21
<212> DNA
<213> synthetic construct

<400> 2179
cgacgataat tccttaattg c 21

<210> 2180
<211> 18
<212> DNA
<213> synthetic construct

<400> 2180
aaagttcgta ttgggtca 18

<210> 2181
<211> 23
<212> DNA
<213> synthetic construct

<400> 2181
atgagaattc aacaattaca ata 23

<210> 2182
<211> 19
<212> DNA

<213> synthetic construct

<400> 2182
cgtttcctta gggactgtt 19

<210> 2183
<211> 22
<212> DNA
<213> synthetic construct

<400> 2183
ttgccaataa aataagaatg ag 22

<210> 2184
<211> 23
<212> DNA
<213> synthetic construct

<400> 2184
ttacctatgg ttgtttagat tgg 23

<210> 2185
<211> 20
<212> DNA
<213> synthetic construct

<400> 2185
cgaaccctct ttacttgttc 20

<210> 2186
<211> 21
<212> DNA
<213> synthetic construct

<400> 2186
ctggtgaaga atgtgaagaa g 21

<210> 2187
<211> 22
<212> DNA
<213> synthetic construct

<400> 2187
aaatatcagt aatgggttgt cc 22

<210> 2188
<211> 19
<212> DNA
<213> synthetic construct

<400> 2188
cgagcataaa cagcatctc 19

<210> 2189
<211> 19
<212> DNA
<213> synthetic construct

<400> 2189
ccagaagaat agggctgac 19

<210> 2190
<211> 20
<212> DNA
<213> synthetic construct

<400> 2190
tcttatcatc tgctgcttcc 20

<210> 2191
<211> 19
<212> DNA
<213> synthetic construct

<400> 2191
tgacgagaga ggacttgtg 19

<210> 2192
<211> 20
<212> DNA
<213> synthetic construct

<400> 2192
agcgatatga tgctttcttt 20

<210> 2193
<211> 22
<212> DNA
<213> synthetic construct

<400> 2193
gataatgcct tggtaatgtc tt 22

<210> 2194
<211> 22
<212> DNA
<213> synthetic construct

<400> 2194
aaaaataggc agtctacatt gg 22

<210> 2195
<211> 22
<212> DNA
<213> synthetic construct

<400> 2195
attcttttaa gtaaaccgct tc 22

<210> 2196
<211> 19
<212> DNA
<213> synthetic construct

<400> 2196
agtaatggcc aattgttgc 19

<210> 2197
<211> 22
<212> DNA
<213> synthetic construct

<400> 2197
tgactaatcc tactttcggt ga 22

<210> 2198
<211> 18
<212> DNA
<213> synthetic construct

<400> 2198
aatccctttg gcttgaga 18

<210> 2199
<211> 22
<212> DNA
<213> synthetic construct

<400> 2199
aaaactgacc ctaataatcc ac 22

<210> 2200
<211> 23
<212> DNA
<213> synthetic construct

<400> 2200
ctattataaa gaacgagggc aaa 23

<210> 2201
<211> 24
<212> DNA
<213> synthetic construct

<400> 2201
agtactattc attttagcac gaca 24

<210> 2202
<211> 20
<212> DNA
<213> synthetic construct

<400> 2202
ccctaaatca agccataaag 20

<210> 2203
<211> 20
<212> DNA
<213> synthetic construct

<400> 2203
tgcaatcata ccacacaaag 20

<210> 2204
<211> 25
<212> DNA
<213> synthetic construct

<400> 2204
agttttatct attgacgatt taagc 25

<210> 2205
<211> 24
<212> DNA
<213> synthetic construct

<400> 2205
caaccgtaat ccctctatta tatc 24

<210> 2206
<211> 20
<212> DNA
<213> synthetic construct

<400> 2206
tgttcttaac catgctgttg 20

<210> 2207
<211> 20

<212> DNA
<213> synthetic construct

<400> 2207
tcattgattg acgaatgtga 20

<210> 2208
<211> 21
<212> DNA
<213> synthetic construct

<400> 2208
taatgaatga aggtgtggaa c 21

<210> 2209
<211> 21
<212> DNA
<213> synthetic construct

<400> 2209
attctgactt ctggcgtact t 21

<210> 2210
<211> 20
<212> DNA
<213> synthetic construct

<400> 2210
aatgggcatt tctcttattg 20

<210> 2211
<211> 24
<212> DNA
<213> synthetic construct

<400> 2211
gtatagaaga tgaagcagca taaa 24

<210> 2212
<211> 20
<212> DNA
<213> synthetic construct

<400> 2212
tcgaaacctt tctgaggtaa 20

<210> 2213
<211> 24
<212> DNA
<213> synthetic construct

<400> 2213
gaacaggtgt tatcatacta gcaa 24

<210> 2214
<211> 22
<212> DNA
<213> synthetic construct

<400> 2214
tgaatctgga atgtttgata ag 22

<210> 2215
<211> 18
<212> DNA
<213> synthetic construct

<400> 2215
gaccgatgac gtggataa 18

<210> 2216
<211> 20
<212> DNA
<213> synthetic construct

<400> 2216
ttattctttc gacgggtatg 20

<210> 2217
<211> 18
<212> DNA
<213> synthetic construct

<400> 2217
atcatcttgc gcttcttg 18

<210> 2218
<211> 21
<212> DNA
<213> synthetic construct

<400> 2218
gctgaatacg gaataatgaa g 21

<210> 2219
<211> 22
<212> DNA
<213> synthetic construct

<400> 2219

tggttagagg aggaattgat ag 22

<210> 2220
<211> 18
<212> DNA
<213> synthetic construct

<400> 2220
agtcatgctg atgcgatt 18

<210> 2221
<211> 20
<212> DNA
<213> synthetic construct

<400> 2221
cgatgaaata tccaaggttt 20

<210> 2222
<211> 20
<212> DNA
<213> synthetic construct

<400> 2222
gcatgaccaa gaggaactaa 20

<210> 2223
<211> 20
<212> DNA
<213> synthetic construct

<400> 2223
tgtagtaaac cagcgtcaaa 20

<210> 2224
<211> 21
<212> DNA
<213> synthetic construct

<400> 2224
aataccttga aatgtgtcgt g 21

<210> 2225
<211> 18
<212> DNA
<213> synthetic construct

<400> 2225
ccgtgtggac aatacctg 18

<210> 2226
<211> 26
<212> DNA
<213> synthetic construct

<400> 2226
acatatgatg tatctatctg gaactc 26

<210> 2227
<211> 21
<212> DNA
<213> synthetic construct

<400> 2227
ctgttaaggc ttctacacga c 21

<210> 2228
<211> 26
<212> DNA
<213> synthetic construct

<400> 2228
tatacaaaat caaaacttga taagga 26

<210> 2229
<211> 21
<212> DNA
<213> synthetic construct

<400> 2229
ttttaatgct gtttgaagtg c 21

<210> 2230
<211> 19
<212> DNA
<213> synthetic construct

<400> 2230
ggagcgcgtt tagtttacg 19

<210> 2231
<211> 20
<212> DNA
<213> synthetic construct

<400> 2231
gccactactt gtccaccatc 20

<210> 2232

<211> 19
<212> DNA
<213> synthetic construct

<400> 2232
ctagggaatg gtctgcttg 19

<210> 2233
<211> 20
<212> DNA
<213> synthetic construct

<400> 2233
gagacggatt ggttagagtg 20

<210> 2234
<211> 21
<212> DNA
<213> synthetic construct

<400> 2234
tcccacttaa ctatgttgct c 21

<210> 2235
<211> 21
<212> DNA
<213> synthetic construct

<400> 2235
cttgcctgac tatttgatga c 21

<210> 2236
<211> 20
<212> DNA
<213> synthetic construct

<400> 2236
tagctcatat tgtcgcaaag 20

<210> 2237
<211> 20
<212> DNA
<213> synthetic construct

<400> 2237
tgatggacct ctgttacctc 20

<210> 2238
<211> 21
<212> DNA

<213> synthetic construct

<400> 2238
ttaaatacgc taaagccctc t 21

<210> 2239
<211> 20
<212> DNA
<213> synthetic construct

<400> 2239
agggtgctta atttgacaag 20

<210> 2240
<211> 20
<212> DNA
<213> synthetic construct

<400> 2240
ccggttatgt taatggaaag 20

<210> 2241
<211> 21
<212> DNA
<213> synthetic construct

<400> 2241
tcaaatcatc ccaagttagt g 21

<210> 2242
<211> 19
<212> DNA
<213> synthetic construct

<400> 2242
gctatttggc cctgtgtag 19

<210> 2243
<211> 20
<212> DNA
<213> synthetic construct

<400> 2243
caaacgtaga tcaatgcaag 20

<210> 2244
<211> 22
<212> DNA
<213> synthetic construct

<400> 2244
gctcacggtc actaataatc tc 22

<210> 2245
<211> 19
<212> DNA
<213> synthetic construct

<400> 2245
ctgacaacca gatcaccac 19

<210> 2246
<211> 21
<212> DNA
<213> synthetic construct

<400> 2246
cccagttcaa ttagattacc c 21

<210> 2247
<211> 20
<212> DNA
<213> synthetic construct

<400> 2247
ttgacttagc ctttgctttc 20

<210> 2248
<211> 19
<212> DNA
<213> synthetic construct

<400> 2248
tttgatggtg ttgggtatg 19

<210> 2249
<211> 20
<212> DNA
<213> synthetic construct

<400> 2249
aaagaggtag gcatttgttg 20

<210> 2250
<211> 22
<212> DNA
<213> synthetic construct

<400> 2250
tcgaagagat tttctatgat cc 22

<210> 2251
<211> 19
<212> DNA
<213> synthetic construct

<400> 2251
cagacatttc cttcctcct 19

<210> 2252
<211> 20
<212> DNA
<213> synthetic construct

<400> 2252
caccagacaa cctttctttc 20

<210> 2253
<211> 20
<212> DNA
<213> synthetic construct

<400> 2253
caagtgtaac cagagcttcc 20

<210> 2254
<211> 20
<212> DNA
<213> synthetic construct

<400> 2254
ttaattgcag tagcagcatc 20

<210> 2255
<211> 19
<212> DNA
<213> synthetic construct

<400> 2255
agccaccaat aatgaggag 19

<210> 2256
<211> 23
<212> DNA
<213> synthetic construct

<400> 2256
agcagtaatc tttggtactg ttt 23

<210> 2257
<211> 26
<212> DNA
<213> synthetic construct

<400> 2257
tggtgaagat agatgagata cttaat 26

<210> 2258
<211> 23
<212> DNA
<213> synthetic construct

<400> 2258
ttatctgatt taggacattt atc 23

<210> 2259
<211> 22
<212> DNA
<213> synthetic construct

<400> 2259
atatcagtta atggacaagc ag 22

<210> 2260
<211> 21
<212> DNA
<213> synthetic construct

<400> 2260
cacgagaagt tcatttcaat c 21

<210> 2261
<211> 22
<212> DNA
<213> synthetic construct

<400> 2261
tcaatcgtga taacagacta gc 22

<210> 2262
<211> 20
<212> DNA
<213> synthetic construct

<400> 2262
aagaaatgga gcaaacaaac 20

<210> 2263
<211> 20

<212> DNA
<213> synthetic construct

<400> 2263
atatccttct gggctattgg 20

<210> 2264
<211> 20
<212> DNA
<213> synthetic construct

<400> 2264
aacaggttga tcagcatagg 20

<210> 2265
<211> 21
<212> DNA
<213> synthetic construct

<400> 2265
tgacaacaat tagtgctgaa g 21

<210> 2266
<211> 20
<212> DNA
<213> synthetic construct

<400> 2266
tcaacccata ccattgaaac 20

<210> 2267
<211> 20
<212> DNA
<213> synthetic construct

<400> 2267
cgctatacga ttaccgagac 20

<210> 2268
<211> 19
<212> DNA
<213> synthetic construct

<400> 2268
gcaacgacga cataatcac 19

<210> 2269
<211> 19
<212> DNA
<213> synthetic construct

<400> 2269
tggcttcaac ttacactgg 19

<210> 2270
<211> 20
<212> DNA
<213> synthetic construct

<400> 2270
tctggatatt actgccaacc 20

<210> 2271
<211> 21
<212> DNA
<213> synthetic construct

<400> 2271
aacaaccttt agcgtttatt g 21

<210> 2272
<211> 21
<212> DNA
<213> synthetic construct

<400> 2272
cggtaatgtg cttatagatg g 21

<210> 2273
<211> 20
<212> DNA
<213> synthetic construct

<400> 2273
tttctgtggt tccaggtaag 20

<210> 2274
<211> 19
<212> DNA
<213> synthetic construct

<400> 2274
cttactggtc ccaaaggtc 19

<210> 2275
<211> 20
<212> DNA
<213> synthetic construct

<400> 2275

tctaatttgc atcgcactac 20

<210> 2276
<211> 23
<212> DNA
<213> synthetic construct

<400> 2276
aatctactga ctaacaagcc aaa 23

<210> 2277
<211> 20
<212> DNA
<213> synthetic construct

<400> 2277
atcataatcc gctccaatac 20

<210> 2278
<211> 21
<212> DNA
<213> synthetic construct

<400> 2278
tttcaacgta tgggttatgt c 21

<210> 2279
<211> 18
<212> DNA
<213> synthetic construct

<400> 2279
tgggaaggtc acatcttg 18

<210> 2280
<211> 23
<212> DNA
<213> synthetic construct

<400> 2280
tctcactagg caaacctatt atc 23

<210> 2281
<211> 21
<212> DNA
<213> synthetic construct

<400> 2281
ccgttcatat aagcaatcat c 21

<210> 2282
<211> 21
<212> DNA
<213> synthetic construct

<400> 2282
cagacgatca gcaagataaa g 21

<210> 2283
<211> 21
<212> DNA
<213> synthetic construct

<400> 2283
ctactaatgg cgcagacata c 21

<210> 2284
<211> 19
<212> DNA
<213> synthetic construct

<400> 2284
cagaaaccac aacgacaag 19

<210> 2285
<211> 19
<212> DNA
<213> synthetic construct

<400> 2285
aacattggca taggtaggg 19

<210> 2286
<211> 26
<212> DNA
<213> synthetic construct

<400> 2286
agtgactaag aaacttgatg ttagag 26

<210> 2287
<211> 25
<212> DNA
<213> synthetic construct

<400> 2287
ctatatctaa atgcccaatt ttatc 25

<210> 2288

<211> 20
<212> DNA
<213> synthetic construct

<400> 2288
ttatctgtag ggctcgtctc 20

<210> 2289
<211> 20
<212> DNA
<213> synthetic construct

<400> 2289
caataggcca tcttcgttag 20

<210> 2290
<211> 20
<212> DNA
<213> synthetic construct

<400> 2290
gtactagaca tggccgaaaa 20

<210> 2291
<211> 22
<212> DNA
<213> synthetic construct

<400> 2291
tcagtaacat caacggaata ga 22

<210> 2292
<211> 18
<212> DNA
<213> synthetic construct

<400> 2292
tccaagccaa cttcacag 18

<210> 2293
<211> 21
<212> DNA
<213> synthetic construct

<400> 2293
ttgagtaaat tctggttcag g 21

<210> 2294
<211> 20
<212> DNA

<213> synthetic construct

<400> 2294
agcattaggt ggatttgttc 20

<210> 2295
<211> 20
<212> DNA
<213> synthetic construct

<400> 2295
tctttcaacc ctttgttagg 20

<210> 2296
<211> 26
<212> DNA
<213> synthetic construct

<400> 2296
tcatactgat ttctacttat ttcacc 26

<210> 2297
<211> 22
<212> DNA
<213> synthetic construct

<400> 2297
aagtctattt gctcatgttt cc 22

<210> 2298
<211> 20
<212> DNA
<213> synthetic construct

<400> 2298
ataatctttc atgggtacgg 20

<210> 2299
<211> 20
<212> DNA
<213> synthetic construct

<400> 2299
ttgccctttt atgtatggag 20

<210> 2300
<211> 21
<212> DNA
<213> synthetic construct

<400> 2300
ttgctagtcc cagtctttat g 21

<210> 2301
<211> 23
<212> DNA
<213> synthetic construct

<400> 2301
cgttgtaatc ttcaatcatc ttc 23

<210> 2302
<211> 26
<212> DNA
<213> synthetic construct

<400> 2302
gatagtagct gaaagtgaga ataaag 26

<210> 2303
<211> 19
<212> DNA
<213> synthetic construct

<400> 2303
aggccatagt ttgtcatcc 19

<210> 2304
<211> 19
<212> DNA
<213> synthetic construct

<400> 2304
ttaactgcgg aaacaacag 19

<210> 2305
<211> 23
<212> DNA
<213> synthetic construct

<400> 2305
gagatagcaa atagattggt cag 23

<210> 2306
<211> 18
<212> DNA
<213> synthetic construct

<400> 2306
taatcggtcc aaatggtg 18

<210> 2307
<211> 20
<212> DNA
<213> synthetic construct

<400> 2307
tcagagccgt catattcttt 20

<210> 2308
<211> 19
<212> DNA
<213> synthetic construct

<400> 2308
ggaggtttac aaagcagga 19

<210> 2309
<211> 20
<212> DNA
<213> synthetic construct

<400> 2309
gctactgtgc atgaaacaaa 20

<210> 2310
<211> 25
<212> DNA
<213> synthetic construct

<400> 2310
aattagattt gaccattaca gagtt 25

<210> 2311
<211> 23
<212> DNA
<213> synthetic construct

<400> 2311
ttactcccat tgtatttcat ttc 23

<210> 2312
<211> 20
<212> DNA
<213> synthetic construct

<400> 2312
gtcgttgaaa ttgtctttgg 20

<210> 2313
<211> 22
<212> DNA
<213> synthetic construct

<400> 2313
acttctatcc ccattttatt tg 22

<210> 2314
<211> 21
<212> DNA
<213> synthetic construct

<400> 2314
cttatgaaga ctgctttgga g 21

<210> 2315
<211> 22
<212> DNA
<213> synthetic construct

<400> 2315
gaaatagaat gaaacaatgc tg 22

<210> 2316
<211> 20
<212> DNA
<213> synthetic construct

<400> 2316
ttctccctac tggtgttctc 20

<210> 2317
<211> 20
<212> DNA
<213> synthetic construct

<400> 2317
atttgctctc tcatcgctac 20

<210> 2318
<211> 22
<212> DNA
<213> synthetic construct

<400> 2318
agcgatcctt atcttacttg tt 22

<210> 2319
<211> 20

<212> DNA
<213> synthetic construct

<400> 2319
ctctcctatt caacgcaaag 20

<210> 2320
<211> 21
<212> DNA
<213> synthetic construct

<400> 2320
acgtcctctt aacagtcaca a 21

<210> 2321
<211> 18
<212> DNA
<213> synthetic construct

<400> 2321
tgcgactagg atggtttc 18

<210> 2322
<211> 19
<212> DNA
<213> synthetic construct

<400> 2322
atcaggctgt tatgcgtct 19

<210> 2323
<211> 18
<212> DNA
<213> synthetic construct

<400> 2323
tgcccatctt tcatttca 18

<210> 2324
<211> 22
<212> DNA
<213> synthetic construct

<400> 2324
aattgtgaac cagttagaaa cc 22

<210> 2325
<211> 18
<212> DNA
<213> synthetic construct

<400> 2325
tgccacctga tagtgagc 18

<210> 2326
<211> 21
<212> DNA
<213> synthetic construct

<400> 2326
gaagaaacgt gaacgattag a 21

<210> 2327
<211> 18
<212> DNA
<213> synthetic construct

<400> 2327
ttaattggcc atccaaga 18

<210> 2328
<211> 22
<212> DNA
<213> synthetic construct

<400> 2328
agatatgatt gcaacaattg aa 22

<210> 2329
<211> 20
<212> DNA
<213> synthetic construct

<400> 2329
cgcatgattg atttgataag 20

<210> 2330
<211> 20
<212> DNA
<213> synthetic construct

<400> 2330
gtgaaaagtc gcatcaaatc 20

<210> 2331
<211> 21
<212> DNA
<213> synthetic construct

<400> 2331

gccataaaca tacatgactc c 21

<210> 2332
<211> 21
<212> DNA
<213> synthetic construct

<400> 2332
cagctgttgc agaagattta g 21

<210> 2333
<211> 19
<212> DNA
<213> synthetic construct

<400> 2333
ccattagctg cttgtgatg 19

<210> 2334
<211> 23
<212> DNA
<213> synthetic construct

<400> 2334
ttctcttaaa tcaaacagga agt 23

<210> 2335
<211> 18
<212> DNA
<213> synthetic construct

<400> 2335
acccatttgg cattaacc 18

<210> 2336
<211> 22
<212> DNA
<213> synthetic construct

<400> 2336
aattgttctc ttattggctt tc 22

<210> 2337
<211> 22
<212> DNA
<213> synthetic construct

<400> 2337
cctggatttt taataggttt ca 22

<210> 2338
<211> 18
<212> DNA
<213> synthetic construct

<400> 2338
gtcttggcgc gagtttta 18

<210> 2339
<211> 18
<212> DNA
<213> synthetic construct

<400> 2339
ttgaagcctt ttgagcag 18

<210> 2340
<211> 19
<212> DNA
<213> synthetic construct

<400> 2340
cattggttcg atcagtcag 19

<210> 2341
<211> 23
<212> DNA
<213> synthetic construct

<400> 2341
gctttggtag gatatattag tgg 23

<210> 2342
<211> 23
<212> DNA
<213> synthetic construct

<400> 2342
tgattaaagg agttaagttg gtg 23

<210> 2343
<211> 21
<212> DNA
<213> synthetic construct

<400> 2343
tgtcaaaatt agcacagatt g 21

<210> 2344

<211> 23
<212> DNA
<213> synthetic construct

<400> 2344
agaaaaagtt gactacgaaa aag 23

<210> 2345
<211> 20
<212> DNA
<213> synthetic construct

<400> 2345
agataaataa cgcgcacaag 20

<210> 2346
<211> 21
<212> DNA
<213> synthetic construct

<400> 2346
tgatgctgag tacaaggatt t 21

<210> 2347
<211> 21
<212> DNA
<213> synthetic construct

<400> 2347
ctttaaaatc agccttatcc a 21

<210> 2348
<211> 18
<212> DNA
<213> synthetic construct

<400> 2348
cggcagacaa gtcagtca 18

<210> 2349
<211> 25
<212> DNA
<213> synthetic construct

<400> 2349
tataatttct ctatcatcac caaaa 25

<210> 2350
<211> 23
<212> DNA

<213> synthetic construct

<400> 2350
gtgatattat ccaaaccatt ctc 23

<210> 2351
<211> 19
<212> DNA
<213> synthetic construct

<400> 2351
ttaaagcggt caaaaggtc 19

<210> 2352
<211> 20
<212> DNA
<213> synthetic construct

<400> 2352
attggacttg tgtcagcttc 20

<210> 2353
<211> 20
<212> DNA
<213> synthetic construct

<400> 2353
cctttgtcta ccttcattgg 20

<210> 2354
<211> 21
<212> DNA
<213> synthetic construct

<400> 2354
gaaggcaatg aggagactta c 21

<210> 2355
<211> 19
<212> DNA
<213> synthetic construct

<400> 2355
ctactcggcc agacaagac 19

<210> 2356
<211> 21
<212> DNA
<213> synthetic construct

<400> 2356
ttttattggg aggttttctt t 21

<210> 2357
<211> 19
<212> DNA
<213> synthetic construct

<400> 2357
aacaaatatg aaggcagca 19

<210> 2358
<211> 24
<212> DNA
<213> synthetic construct

<400> 2358
tgaaaaagtt attattatct gcaa 24

<210> 2359
<211> 21
<212> DNA
<213> synthetic construct

<400> 2359
atcagtggaa ataagagaag c 21

<210> 2360
<211> 21
<212> DNA
<213> synthetic construct

<400> 2360
agatgaaaag cttgctaatg a 21

<210> 2361
<211> 20
<212> DNA
<213> synthetic construct

<400> 2361
ttaatgaacg atttcttttt 20

<210> 2362
<211> 18
<212> DNA
<213> synthetic construct

<400> 2362
tggctgactc tcctgatg 18

<210> 2363
<211> 22
<212> DNA
<213> synthetic construct

<400> 2363
ttgcagatag gtattgatat gg 22

<210> 2364
<211> 21
<212> DNA
<213> synthetic construct

<400> 2364
atggataata agcgaacaca g 21

<210> 2365
<211> 19
<212> DNA
<213> synthetic construct

<400> 2365
gacatactgc cacaacgac 19

<210> 2366
<211> 23
<212> DNA
<213> synthetic construct

<400> 2366
ttatattgaa acactgaagc aac 23

<210> 2367
<211> 18
<212> DNA
<213> synthetic construct

<400> 2367
ctcctgccca ttgttcta 18

<210> 2368
<211> 20
<212> DNA
<213> synthetic construct

<400> 2368
cgctattaac cttgctgaac 20

<210> 2369
<211> 20
<212> DNA
<213> synthetic construct

<400> 2369
cctttctcac tcaccacatc 20

<210> 2370
<211> 19
<212> DNA
<213> synthetic construct

<400> 2370
ttgttgcaat acagccatc 19

<210> 2371
<211> 24
<212> DNA
<213> synthetic construct

<400> 2371
cgataaatta caaaatacgt ttca 24

<210> 2372
<211> 22
<212> DNA
<213> synthetic construct

<400> 2372
aactttagcc ccactactat ca 22

<210> 2373
<211> 19
<212> DNA
<213> synthetic construct

<400> 2373
aataccatta tcggggaag 19

<210> 2374
<211> 18
<212> DNA
<213> synthetic construct

<400> 2374
actccgccag accttaga 18

<210> 2375
<211> 20

<212> DNA
<213> synthetic construct

<400> 2375
atattgaacg ctgtgcttgt 20

<210> 2376
<211> 18
<212> DNA
<213> synthetic construct

<400> 2376
gcgattctat ggctgatg 18

<210> 2377
<211> 20
<212> DNA
<213> synthetic construct

<400> 2377
ttatgcccgt ttctttgtag 20

<210> 2378
<211> 24
<212> DNA
<213> synthetic construct

<400> 2378
tctaatctta attcctctgt tcct 24

<210> 2379
<211> 26
<212> DNA
<213> synthetic construct

<400> 2379
tgatatagac ttgattaaag gtgatt 26

<210> 2380
<211> 20
<212> DNA
<213> synthetic construct

<400> 2380
tctttactga gcttccatcc 20

<210> 2381
<211> 22
<212> DNA
<213> synthetic construct

<400> 2381
catcactatc tggctctatt tg 22

<210> 2382
<211> 20
<212> DNA
<213> synthetic construct

<400> 2382
tattgagcgc attgatttac 20

<210> 2383
<211> 20
<212> DNA
<213> synthetic construct

<400> 2383
ctatgcacat taggacgttg 20

<210> 2384
<211> 22
<212> DNA
<213> synthetic construct

<400> 2384
tcatatcgct gtattacctt ga 22

<210> 2385
<211> 19
<212> DNA
<213> synthetic construct

<400> 2385
cttattagcc gcccttaac 19

<210> 2386
<211> 20
<212> DNA
<213> synthetic construct

<400> 2386
agcgcaaact cttcagatac 20

<210> 2387
<211> 20
<212> DNA
<213> synthetic construct

<400> 2387

tttaatcact cgtcctagcc 20

<210> 2388
<211> 19
<212> DNA
<213> synthetic construct

<400> 2388
aatattggtc aagctgcaa 19

<210> 2389
<211> 19
<212> DNA
<213> synthetic construct

<400> 2389
atgttctgtc cctgtttgg 19

<210> 2390
<211> 20
<212> DNA
<213> synthetic construct

<400> 2390
aaatagtggt ggtgtgttcc 20

<210> 2391
<211> 21
<212> DNA
<213> synthetic construct

<400> 2391
ttagcgtctt tcccttctaa c 21

<210> 2392
<211> 23
<212> DNA
<213> synthetic construct

<400> 2392
atgaaagcaa aaattgtact agg 23

<210> 2393
<211> 23
<212> DNA
<213> synthetic construct

<400> 2393
ttacttggtt atctagacgc tga 23

<210> 2394
<211> 21
<212> DNA
<213> synthetic construct

<400> 2394
tgcacttgtt tacgagagat t 21

<210> 2395
<211> 20
<212> DNA
<213> synthetic construct

<400> 2395
gaaatggcct ctactgtttg 20

<210> 2396
<211> 20
<212> DNA
<213> synthetic construct

<400> 2396
cagacaatgc gtttattttg 20

<210> 2397
<211> 18
<212> DNA
<213> synthetic construct

<400> 2397
tacgtaatgc ggcgattc 18

<210> 2398
<211> 23
<212> DNA
<213> synthetic construct

<400> 2398
aaacaataga tactttgcca ctt 23

<210> 2399
<211> 20
<212> DNA
<213> synthetic construct

<400> 2399
ttcgctgtta atatcccact 20

<210> 2400

<211> 19
<212> DNA
<213> synthetic construct

<400> 2400
cttgccgtag ttgaaggtc 19

<210> 2401
<211> 20
<212> DNA
<213> synthetic construct

<400> 2401
tacattggca ttagcatcag 20

<210> 2402
<211> 24
<212> DNA
<213> synthetic construct

<400> 2402
ttaagtaaag ctaaatccag aatg 24

<210> 2403
<211> 20
<212> DNA
<213> synthetic construct

<400> 2403
ataaatgatg tggcaggttg 20

<210> 2404
<211> 20
<212> DNA
<213> synthetic construct

<400> 2404
attattctcg ccagtgtttc 20

<210> 2405
<211> 19
<212> DNA
<213> synthetic construct

<400> 2405
cgatacgttt agcaccttg 19

<210> 2406
<211> 25
<212> DNA

<213> synthetic construct

<400> 2406
aatgtaaata aagacaatgc taacc 25

<210> 2407
<211> 18
<212> DNA
<213> synthetic construct

<400> 2407
atcttgccat gcttcaac 18

<210> 2408
<211> 20
<212> DNA
<213> synthetic construct

<400> 2408
taaagcattc ggtattccac 20

<210> 2409
<211> 20
<212> DNA
<213> synthetic construct

<400> 2409
agcgcattat tccattctac 20

<210> 2410
<211> 21
<212> DNA
<213> synthetic construct

<400> 2410
aattggctac tcctcgatta c 21

<210> 2411
<211> 19
<212> DNA
<213> synthetic construct

<400> 2411
tgttgtgcta aagggtgtg 19

<210> 2412
<211> 18
<212> DNA
<213> synthetic construct

<400> 2412
tgcggcttta gtatttgg 18

<210> 2413
<211> 19
<212> DNA
<213> synthetic construct

<400> 2413
gaagttgata acggcttgg 19

<210> 2414
<211> 19
<212> DNA
<213> synthetic construct

<400> 2414
tttctcacaa gcagagcag 19

<210> 2415
<211> 19
<212> DNA
<213> synthetic construct

<400> 2415
tcatcgcttt gtaaattgg 19

<210> 2416
<211> 20
<212> DNA
<213> synthetic construct

<400> 2416
atgccgtatt agatcacacc 20

<210> 2417
<211> 20
<212> DNA
<213> synthetic construct

<400> 2417
tttcccacat taccaaagtc 20

<210> 2418
<211> 20
<212> DNA
<213> synthetic construct

<400> 2418
aacaggcaca ttaacagagg 20

<210> 2419
<211> 20
<212> DNA
<213> synthetic construct

<400> 2419
tttatcttca gggagcaatc 20

<210> 2420
<211> 20
<212> DNA
<213> synthetic construct

<400> 2420
gcacactgac ccaattaaag 20

<210> 2421
<211> 20
<212> DNA
<213> synthetic construct

<400> 2421
attaaacatg gtgcgatagg 20

<210> 2422
<211> 18
<212> DNA
<213> synthetic construct

<400> 2422
tggcttggaa acacaatc 18

<210> 2423
<211> 20
<212> DNA
<213> synthetic construct

<400> 2423
aattcgagtg atggacaaac 20

<210> 2424
<211> 21
<212> DNA
<213> synthetic construct

<400> 2424
cgagcatgac actaataatg g 21

<210> 2425
<211> 19
<212> DNA
<213> synthetic construct

<400> 2425
ccgcttgcag atatagcat 19

<210> 2426
<211> 18
<212> DNA
<213> synthetic construct

<400> 2426
tacgtacatc gccaccag 18

<210> 2427
<211> 22
<212> DNA
<213> synthetic construct

<400> 2427
aaaggaacag gactactttg ag 22

<210> 2428
<211> 20
<212> DNA
<213> synthetic construct

<400> 2428
gaaatacgca ttaggctctg 20

<210> 2429
<211> 21
<212> DNA
<213> synthetic construct

<400> 2429
gcgttatagc agtttaatcc a 21

<210> 2430
<211> 22
<212> DNA
<213> synthetic construct

<400> 2430
caaggtttcg ctaactaaag ag 22

<210> 2431
<211> 20

<212> DNA
<213> synthetic construct

<400> 2431
actttgattg atccgttttc 20

<210> 2432
<211> 23
<212> DNA
<213> synthetic construct

<400> 2432
ttctaaaggt ggtaatgttt ctt 23

<210> 2433
<211> 18
<212> DNA
<213> synthetic construct

<400> 2433
gcatatcctt ggcctaca 18

<210> 2434
<211> 20
<212> DNA
<213> synthetic construct

<400> 2434
gagccttgtt tatccctctt 20

<210> 2435
<211> 19
<212> DNA
<213> synthetic construct

<400> 2435
tctatcccag cggttaaaa 19

<210> 2436
<211> 20
<212> DNA
<213> synthetic construct

<400> 2436
gctcatatca tcttccatcc 20

<210> 2437
<211> 20
<212> DNA
<213> synthetic construct

<400> 2437
cctaagcaaa ttaacgaacc 20

<210> 2438
<211> 24
<212> DNA
<213> synthetic construct

<400> 2438
aagataggta cgcttttaat ttct 24

<210> 2439
<211> 22
<212> DNA
<213> synthetic construct

<400> 2439
agtaataatt tagctcgcca tt 22

<210> 2440
<211> 22
<212> DNA
<213> synthetic construct

<400> 2440
tcacagtcac cactaatctc ac 22

<210> 2441
<211> 18
<212> DNA
<213> synthetic construct

<400> 2441
acgaaacgcc ctctttac 18

<210> 2442
<211> 19
<212> DNA
<213> synthetic construct

<400> 2442
acgtccctga aacactctc 19

<210> 2443
<211> 20
<212> DNA
<213> synthetic construct

<400> 2443

aaccaatgct gtaaccactc 20

<210> 2444
<211> 19
<212> DNA
<213> synthetic construct

<400> 2444
caggaacggg tttcttatc 19

<210> 2445
<211> 26
<212> DNA
<213> synthetic construct

<400> 2445
gcttataaaa gactagataa atgtcg 26

<210> 2446
<211> 21
<212> DNA
<213> synthetic construct

<400> 2446
atcacttcta tccaaaacga a 21

<210> 2447
<211> 20
<212> DNA
<213> synthetic construct

<400> 2447
aagttgctaa agcgtcatct 20

<210> 2448
<211> 21
<212> DNA
<213> synthetic construct

<400> 2448
caacagtgat ttccatttga g 21

<210> 2449
<211> 19
<212> DNA
<213> synthetic construct

<400> 2449
acgccttgaa cctttagac 19

<210> 2450
<211> 22
<212> DNA
<213> synthetic construct

<400> 2450
acacaatcca ttcatcagtt ag 22

<210> 2451
<211> 19
<212> DNA
<213> synthetic construct

<400> 2451
tttcgggaag caattctat 19

<210> 2452
<211> 22
<212> DNA
<213> synthetic construct

<400> 2452
gacttaattg ctcctcgtat tg 22

<210> 2453
<211> 20
<212> DNA
<213> synthetic construct

<400> 2453
cgcgtctaag gtaacatctc 20

<210> 2454
<211> 20
<212> DNA
<213> synthetic construct

<400> 2454
attaagcgca aatgaaacag 20

<210> 2455
<211> 20
<212> DNA
<213> synthetic construct

<400> 2455
gatattgaga tgccaaggtg 20

<210> 2456

<211> 25
<212> DNA
<213> synthetic construct

<400> 2456
aaaaatgtag tgtttcagat tttag 25

<210> 2457
<211> 25
<212> DNA
<213> synthetic construct

<400> 2457
tcatagcgat actttattat gtttt 25

<210> 2458
<211> 26
<212> DNA
<213> synthetic construct

<400> 2458
taaattagct ttagttcttg gtttag 26

<210> 2459
<211> 18
<212> DNA
<213> synthetic construct

<400> 2459
gttttgagca gcacttgg 18

<210> 2460
<211> 19
<212> DNA
<213> synthetic construct

<400> 2460
tggcaccact attgctatg 19

<210> 2461
<211> 20
<212> DNA
<213> synthetic construct

<400> 2461
ttttggcgta tcgttatttt 20

<210> 2462
<211> 24
<212> DNA

<213> synthetic construct

<400> 2462
gatggtaatg ctgataataa caaa 24

<210> 2463
<211> 19
<212> DNA
<213> synthetic construct

<400> 2463
actaacgcgg tgtaatgct 19

<210> 2464
<211> 18
<212> DNA
<213> synthetic construct

<400> 2464
caatctatgc ctcgcaaa 18

<210> 2465
<211> 19
<212> DNA
<213> synthetic construct

<400> 2465
agctgccgtt tctgttact 19

<210> 2466
<211> 19
<212> DNA
<213> synthetic construct

<400> 2466
aacagtggtt tagcccaag 19

<210> 2467
<211> 18
<212> DNA
<213> synthetic construct

<400> 2467
tggcaacaaa atctccac 18

<210> 2468
<211> 25
<212> DNA
<213> synthetic construct

<400> 2468
ttactaaatt ctacagcagt aatgg 25

<210> 2469
<211> 23
<212> DNA
<213> synthetic construct

<400> 2469
attggtattc tgctaataag gtg 23

<210> 2470
<211> 18
<212> DNA
<213> synthetic construct

<400> 2470
ccggttcata ttgggtct 18

<210> 2471
<211> 24
<212> DNA
<213> synthetic construct

<400> 2471
tcagtcataa ttcaaataga aggt 24

<210> 2472
<211> 20
<212> DNA
<213> synthetic construct

<400> 2472
ccttctaacg ccacttacac 20

<210> 2473
<211> 20
<212> DNA
<213> synthetic construct

<400> 2473
atgcgataac caacactttc 20

<210> 2474
<211> 20
<212> DNA
<213> synthetic construct

<400> 2474
aacatatgag ggtgtggact 20

<210> 2475
<211> 23
<212> DNA
<213> synthetic construct

<400> 2475
gaagcaacgt aaatttctta cac 23

<210> 2476
<211> 22
<212> DNA
<213> synthetic construct

<400> 2476
ttgattttgc gaatatagat gt 22

<210> 2477
<211> 21
<212> DNA
<213> synthetic construct

<400> 2477
caataatgaa aagcatcagg t 21

<210> 2478
<211> 23
<212> DNA
<213> synthetic construct

<400> 2478
tggagtatca gagctatttt gtt 23

<210> 2479
<211> 25
<212> DNA
<213> synthetic construct

<400> 2479
agtcagccat aatttatcta gtttt 25

<210> 2480
<211> 20
<212> DNA
<213> synthetic construct

<400> 2480
ctatcagcca cctcttcttg 20

<210> 2481
<211> 20
<212> DNA
<213> synthetic construct

<400> 2481
ctaatgagca tcgtttagcc 20

<210> 2482
<211> 24
<212> DNA
<213> synthetic construct

<400> 2482
gcactagcta ctattctttc tgct 24

<210> 2483
<211> 19
<212> DNA
<213> synthetic construct

<400> 2483
aacggttgct tttacatcc 19

<210> 2484
<211> 18
<212> DNA
<213> synthetic construct

<400> 2484
gaggtactgc atcgcaaa 18

<210> 2485
<211> 22
<212> DNA
<213> synthetic construct

<400> 2485
taccttctct aaatggtgtt ga 22

<210> 2486
<211> 20
<212> DNA
<213> synthetic construct

<400> 2486
gcgcttgaac taacctctac 20

<210> 2487
<211> 18

<212> DNA
<213> synthetic construct

<400> 2487
ggatgaccca ccataagc 18

<210> 2488
<211> 19
<212> DNA
<213> synthetic construct

<400> 2488
gctcagcaga aaccttgtc 19

<210> 2489
<211> 19
<212> DNA
<213> synthetic construct

<400> 2489
ctggcgtaaa ctgccaata 19

<210> 2490
<211> 24
<212> DNA
<213> synthetic construct

<400> 2490
gggatcttct ataactattc aacc 24

<210> 2491
<211> 20
<212> DNA
<213> synthetic construct

<400> 2491
taacctggaa cattctgacc 20

<210> 2492
<211> 22
<212> DNA
<213> synthetic construct

<400> 2492
tttctttgat ctaccttggt tc 22

<210> 2493
<211> 23
<212> DNA
<213> synthetic construct

<400> 2493
tgtaggctgc tttactacta tcc 23

<210> 2494
<211> 23
<212> DNA
<213> synthetic construct

<400> 2494
aagaacaagt agcaggtaaa gag 23

<210> 2495
<211> 19
<212> DNA
<213> synthetic construct

<400> 2495
cagttagctt tgcgatgtg 19

<210> 2496
<211> 25
<212> DNA
<213> synthetic construct

<400> 2496
ccaacttact tctatctacc tgatg 25

<210> 2497
<211> 23
<212> DNA
<213> synthetic construct

<400> 2497
gttccagagt attggtattg ttc 23

<210> 2498
<211> 20
<212> DNA
<213> synthetic construct

<400> 2498
catcttattg tgggtccaag 20

<210> 2499
<211> 20
<212> DNA
<213> synthetic construct

<400> 2499

aagagcgaat acctgatgac 20

<210> 2500
<211> 19
<212> DNA
<213> synthetic construct

<400> 2500
cgtaagcctt atgttcgtg 19

<210> 2501
<211> 19
<212> DNA
<213> synthetic construct

<400> 2501
taaacaatta gcgccactg 19

<210> 2502
<211> 22
<212> DNA
<213> synthetic construct

<400> 2502
aatcagaatc aacttcctaa gc 22

<210> 2503
<211> 21
<212> DNA
<213> synthetic construct

<400> 2503
aacaccaata attgcgataa c 21

<210> 2504
<211> 20
<212> DNA
<213> synthetic construct

<400> 2504
gcgaagtaga agagaaagca 20

<210> 2505
<211> 19
<212> DNA
<213> synthetic construct

<400> 2505
tttcagagtg gcggttatt 19

<210> 2506
<211> 20
<212> DNA
<213> synthetic construct

<400> 2506
agctgatgtt gttgttgttg 20

<210> 2507
<211> 19
<212> DNA
<213> synthetic construct

<400> 2507
ttgattgcac ctttctctg 19

<210> 2508
<211> 19
<212> DNA
<213> synthetic construct

<400> 2508
ctaaatatgg cgcaggaac 19

<210> 2509
<211> 20
<212> DNA
<213> synthetic construct

<400> 2509
atagtgccaa tcatccaaag 20

<210> 2510
<211> 22
<212> DNA
<213> synthetic construct

<400> 2510
gttcataggc ttcacgtagt tc 22

<210> 2511
<211> 22
<212> DNA
<213> synthetic construct

<400> 2511
gtcaaatcca ttacttagca ca 22

<210> 2512

<211> 20
<212> DNA
<213> synthetic construct

<400> 2512
tggctgaaaa tgtcgttaat 20

<210> 2513
<211> 18
<212> DNA
<213> synthetic construct

<400> 2513
aatgatttag ccgcttct 18

<210> 2514
<211> 26
<212> DNA
<213> synthetic construct

<400> 2514
gaaaggactt aaacttaact atccag 26

<210> 2515
<211> 21
<212> DNA
<213> synthetic construct

<400> 2515
agggtcgtga atagaaacaa g 21

<210> 2516
<211> 21
<212> DNA
<213> synthetic construct

<400> 2516
actgacgctt atttgattga c 21

<210> 2517
<211> 20
<212> DNA
<213> synthetic construct

<400> 2517
gtacgtttca agagtgatgc 20

<210> 2518
<211> 21
<212> DNA

<213> synthetic construct

<400> 2518
atggataata aaacgtatga a 21

<210> 2519
<211> 23
<212> DNA
<213> synthetic construct

<400> 2519
caattcttct atttcatctt gtg 23

<210> 2520
<211> 18
<212> DNA
<213> synthetic construct

<400> 2520
tagctcgtgc atcaaagg 18

<210> 2521
<211> 21
<212> DNA
<213> synthetic construct

<400> 2521
aacctctgtc tccttctcaa c 21

<210> 2522
<211> 20
<212> DNA
<213> synthetic construct

<400> 2522
acactggctg aattaagtgc 20

<210> 2523
<211> 22
<212> DNA
<213> synthetic construct

<400> 2523
aacccgcttt aatactgtta tc 22

<210> 2524
<211> 21
<212> DNA
<213> synthetic construct

<400> 2524
ttatctgcaa cactgatttc c 21

<210> 2525
<211> 20
<212> DNA
<213> synthetic construct

<400> 2525
tttccggcac agtaataaag 20

<210> 2526
<211> 25
<212> DNA
<213> synthetic construct

<400> 2526
gaaaattcac gtatgtcatg gaatc 25

<210> 2527
<211> 20
<212> DNA
<213> synthetic construct

<400> 2527
gcatttttcc cagatggctt 20

<210> 2528
<211> 19
<212> DNA
<213> synthetic construct

<400> 2528
acgttctgac tggaggaag 19

<210> 2529
<211> 20
<212> DNA
<213> synthetic construct

<400> 2529
ttcaatagag cgaaggattg 20

<210> 2530
<211> 19
<212> DNA
<213> synthetic construct

<400> 2530
tcacgctgtt gttaggaag 19

<210> 2531
<211> 19
<212> DNA
<213> synthetic construct

<400> 2531
aggctgggtg aagtaagtg 19

<210> 2532
<211> 20
<212> DNA
<213> synthetic construct

<400> 2532
cggaactgta taatcccttg 20

<210> 2533
<211> 18
<212> DNA
<213> synthetic construct

<400> 2533
agtggcaaca gcaggtag 18

<210> 2534
<211> 20
<212> DNA
<213> synthetic construct

<400> 2534
cgtaggcatg atagaaatgg 20

<210> 2535
<211> 20
<212> DNA
<213> synthetic construct

<400> 2535
gtatcccgca gataaatcac 20

<210> 2536
<211> 19
<212> DNA
<213> synthetic construct

<400> 2536
cacgatagtt gtggcagac 19

<210> 2537
<211> 18
<212> DNA
<213> synthetic construct

<400> 2537
actcaaccca tcctaccc 18

<210> 2538
<211> 25
<212> DNA
<213> synthetic construct

<400> 2538
agcttttgtt ttatatttct attgg 25

<210> 2539
<211> 26
<212> DNA
<213> synthetic construct

<400> 2539
tttagtcttt tgtcaattac actttt 26

<210> 2540
<211> 18
<212> DNA
<213> synthetic construct

<400> 2540
ttgacgaagg cgtttatg 18

<210> 2541
<211> 19
<212> DNA
<213> synthetic construct

<400> 2541
tgtgacttgg aacaaccag 19

<210> 2542
<211> 25
<212> DNA
<213> synthetic construct

<400> 2542
tttaaagaat ggaaccaaga tcaaa 25

<210> 2543
<211> 23

<212> DNA
<213> synthetic construct

<400> 2543
tcgcctttta aatgtgtagc aaa 23

<210> 2544
<211> 19
<212> DNA
<213> synthetic construct

<400> 2544
gacaataccg cgatgaata 19

<210> 2545
<211> 19
<212> DNA
<213> synthetic construct

<400> 2545
ccggtggtat tgcctttta 19

<210> 2546
<211> 18
<212> DNA
<213> synthetic construct

<400> 2546
aatcatcctc gtggcttt 18

<210> 2547
<211> 20
<212> DNA
<213> synthetic construct

<400> 2547
gctaaattgg gatagtcctg 20

<210> 2548
<211> 20
<212> DNA
<213> synthetic construct

<400> 2548
tacagtcatt tcacgcaaac 20

<210> 2549
<211> 21
<212> DNA
<213> synthetic construct

<400> 2549
tcacgctctt catttagttc t 21

<210> 2550
<211> 20
<212> DNA
<213> synthetic construct

<400> 2550
agttgtagtt gtcgggtttg 20

<210> 2551
<211> 20
<212> DNA
<213> synthetic construct

<400> 2551
tgaagtcgct tttcctagag 20

<210> 2552
<211> 21
<212> DNA
<213> synthetic construct

<400> 2552
gccaataagc aagttgaaat a 21

<210> 2553
<211> 22
<212> DNA
<213> synthetic construct

<400> 2553
atttaaaatg tctcgcaatt ct 22

<210> 2554
<211> 19
<212> DNA
<213> synthetic construct

<400> 2554
catgcgtgta aatcatcgt 19

<210> 2555
<211> 18
<212> DNA
<213> synthetic construct

<400> 2555

cccttgagcg gaagtatc 18

<210> 2556
<211> 21
<212> DNA
<213> synthetic construct

<400> 2556
tgaggaaggt agtaagggaa a 21

<210> 2557
<211> 21
<212> DNA
<213> synthetic construct

<400> 2557
caaacatatt gggttgatag g 21

<210> 2558
<211> 21
<212> DNA
<213> synthetic construct

<400> 2558
tagcaataca atcgcacata c 21

<210> 2559
<211> 21
<212> DNA
<213> synthetic construct

<400> 2559
tggtatatct tcaccaacac c 21

<210> 2560
<211> 18
<212> DNA
<213> synthetic construct

<400> 2560
tgaagatggc agcaagag 18

<210> 2561
<211> 20
<212> DNA
<213> synthetic construct

<400> 2561
tcaaaccctc attaacatcc 20

<210> 2562
<211> 20
<212> DNA
<213> synthetic construct

<400> 2562
agagatgaat gcaggaacag 20

<210> 2563
<211> 20
<212> DNA
<213> synthetic construct

<400> 2563
accaccttgg aaatgtaatg 20

<210> 2564
<211> 20
<212> DNA
<213> synthetic construct

<400> 2564
caaacaagaa ttagccgaag 20

<210> 2565
<211> 19
<212> DNA
<213> synthetic construct

<400> 2565
cagaagcaac tgtgattgg 19

<210> 2566
<211> 20
<212> DNA
<213> synthetic construct

<400> 2566
tacagatgca gacggtgtag 20

<210> 2567
<211> 20
<212> DNA
<213> synthetic construct

<400> 2567
ccctgtccat atccagtatc 20

<210> 2568

<211> 19
<212> DNA
<213> synthetic construct

<400> 2568
gccggtgtat cactaaagg 19

<210> 2569
<211> 20
<212> DNA
<213> synthetic construct

<400> 2569
ctgttctagt cccattgctc 20

<210> 2570
<211> 28
<212> DNA
<213> synthetic construct

<400> 2570
taataaaacg tatgaaatat catctgca 28

<210> 2571
<211> 28
<212> DNA
<213> synthetic construct

<400> 2571
tttcatcttg tgatagatct tctttttc 28

<210> 2572
<211> 21
<212> DNA
<213> synthetic construct

<400> 2572
cttggttagc gattcagtta g 21

<210> 2573
<211> 20
<212> DNA
<213> synthetic construct

<400> 2573
caattcatcg tctggatagg 20

<210> 2574
<211> 25
<212> DNA

<213> synthetic construct

<400> 2574
agcaagttga aatatctatg gctga 25

<210> 2575
<211> 25
<212> DNA
<213> synthetic construct

<400> 2575
tcatttaaaa tgtctcgcaa ttctt 25

<210> 2576
<211> 20
<212> DNA
<213> synthetic construct

<400> 2576
acatcgaact ggatctcaac 20

<210> 2577
<211> 21
<212> DNA
<213> synthetic construct

<400> 2577
tctcagcgat ctgtctattt c 21

<210> 2578
<211> 20
<212> DNA
<213> synthetic construct

<400> 2578
tgtgcagtac cagtaaggtg 20

<210> 2579
<211> 19
<212> DNA
<213> synthetic construct

<400> 2579
ctccggttgg gtaaagtag 19

<210> 2580
<211> 20
<212> DNA
<213> synthetic construct

<400> 2580
acagtgccag ttcttatcgt 20

<210> 2581
<211> 20
<212> DNA
<213> synthetic construct

<400> 2581
gaagccaacc tttatttcct 20

<210> 2582
<211> 20
<212> DNA
<213> synthetic construct

<400> 2582
ctcacccaaa tggagattta 20

<210> 2583
<211> 20
<212> DNA
<213> synthetic construct

<400> 2583
cttgcttttc agatgtttcc 20

<210> 2584
<211> 18
<212> DNA
<213> synthetic construct

<400> 2584
acaacatttc gccaaaca 18

<210> 2585
<211> 21
<212> DNA
<213> synthetic construct

<400> 2585
ttgagctaaa gacattcctg t 21

<210> 2586
<211> 21
<212> DNA
<213> synthetic construct

<400> 2586
aatgatggct ttgaagtagt g 21

<210> 2587
<211> 20
<212> DNA
<213> synthetic construct

<400> 2587
cctgttcttg cttctgtttc 20

<210> 2588
<211> 18
<212> DNA
<213> synthetic construct

<400> 2588
ccatcaggca acagaatg 18

<210> 2589
<211> 20
<212> DNA
<213> synthetic construct

<400> 2589
tgacgatctg gaacctttac 20

<210> 2590
<211> 20
<212> DNA
<213> synthetic construct

<400> 2590
cttactatcg gagctggtca 20

<210> 2591
<211> 18
<212> DNA
<213> synthetic construct

<400> 2591
agggcatctc cctgatac 18

<210> 2592
<211> 20
<212> DNA
<213> synthetic construct

<400> 2592
tcactcatta accattgctg 20

<210> 2593
<211> 20
<212> DNA
<213> synthetic construct

<400> 2593
gtatgtcact caaggtgctg 20

<210> 2594
<211> 25
<212> DNA
<213> synthetic construct

<400> 2594
ttatctgttt tgttactgct tacac 25

<210> 2595
<211> 20
<212> DNA
<213> synthetic construct

<400> 2595
ttctaatcct cccaaagtcc 20

<210> 2596
<211> 20
<212> DNA
<213> synthetic construct

<400> 2596
tgacttcgga tgagttcaat 20

<210> 2597
<211> 21
<212> DNA
<213> synthetic construct

<400> 2597
gctgttaatt gttgttgctt t 21

<210> 2598
<211> 24
<212> DNA
<213> synthetic construct

<400> 2598
aagtataatc agttcattgc tcac 24

<210> 2599
<211> 20

<212> DNA
<213> synthetic construct

<400> 2599
gtttcgacta cgacagttgg 20

<210> 2600
<211> 22
<212> DNA
<213> synthetic construct

<400> 2600
tgctttagtt ttaagtgcat gt 22

<210> 2601
<211> 20
<212> DNA
<213> synthetic construct

<400> 2601
tccttcatta cactcttggc 20

<210> 2602
<211> 20
<212> DNA
<213> synthetic construct

<400> 2602
tttgaaggaa ctgaaggttg 20

<210> 2603
<211> 21
<212> DNA
<213> synthetic construct

<400> 2603
ttctatttgc tgtgaatcct g 21

<210> 2604
<211> 18
<212> DNA
<213> synthetic construct

<400> 2604
ggcttacggg atcaagac 18

<210> 2605
<211> 18
<212> DNA
<213> synthetic construct

<400> 2605
attggcctgg aagctcac 18

<210> 2606
<211> 19
<212> DNA
<213> synthetic construct

<400> 2606
gcggtaagat ccttgagag 19

<210> 2607
<211> 20
<212> DNA
<213> synthetic construct

<400> 2607
agtggtcctg caactttatc 20

<210> 2608
<211> 27
<212> DNA
<213> synthetic construct

<400> 2608
agttgaaaat gaaatatgta taagaac 27

<210> 2609
<211> 21
<212> DNA
<213> synthetic construct

<400> 2609
aactgcatta gcatttcttt c 21

<210> 2610
<211> 18
<212> DNA
<213> synthetic construct

<400> 2610
tcattcgcac atgtaggc 18

<210> 2611
<211> 18
<212> DNA
<213> synthetic construct

<400> 2611

gggatcgtca ccgtaatc 18

<210> 2612
<211> 18
<212> DNA
<213> synthetic construct

<400> 2612
gaccgatcac cctacgag 18

<210> 2613
<211> 21
<212> DNA
<213> synthetic construct

<400> 2613
cgaaatgctt ctcaagatag g 21

<210> 2614
<211> 18
<212> DNA
<213> synthetic construct

<400> 2614
aagtttcatt gccagacg 18

<210> 2615
<211> 18
<212> DNA
<213> synthetic construct

<400> 2615
tagactgcgt tgctcctc 18

<210> 2616
<211> 19
<212> DNA
<213> synthetic construct

<400> 2616
gccgaagtat cgactcaac 19

<210> 2617
<211> 20
<212> DNA
<213> synthetic construct

<400> 2617
agcactacat ttcgctcatc 20

<210> 2618
<211> 20
<212> DNA
<213> synthetic construct

<400> 2618
gcaggtcaca ttgatacaca 20

<210> 2619
<211> 18
<212> DNA
<213> synthetic construct

<400> 2619
catatcgcga cctgaaag 18

<210> 2620
<211> 20
<212> DNA
<213> synthetic construct

<400> 2620
gctattggtg tttatggctc 20

<210> 2621
<211> 20
<212> DNA
<213> synthetic construct

<400> 2621
ctgattgctt aactgcttca 20

<210> 2622
<211> 22
<212> DNA
<213> synthetic construct

<400> 2622
gctaaatcga tctcatatcg tc 22

<210> 2623
<211> 19
<212> DNA
<213> synthetic construct

<400> 2623
ggcgtgtttg aaccatgta 19

<210> 2624

<211> 19
<212> DNA
<213> synthetic construct

<400> 2624
ctcatttggc tcaaaggtc 19

<210> 2625
<211> 18
<212> DNA
<213> synthetic construct

<400> 2625
tgaataggac agcgaagg 18

<210> 2626
<211> 20
<212> DNA
<213> synthetic construct

<400> 2626
gagaatatca ccggaattga 20

<210> 2627
<211> 20
<212> DNA
<213> synthetic construct

<400> 2627
gctcgacata ctgttcttcc 20

<210> 2628
<211> 18
<212> DNA
<213> synthetic construct

<400> 2628
cctgaccaag tccaatcc 18

<210> 2629
<211> 20
<212> DNA
<213> synthetic construct

<400> 2629
tagatcacgt aagcaccaag 20

<210> 2630
<211> 18
<212> DNA

<213> synthetic construct

<400> 2630
tgcgatgctc tatgagtg 18

<210> 2631
<211> 19
<212> DNA
<213> synthetic construct

<400> 2631
gtaccttgcc tctcaaacc 19

<210> 2632
<211> 20
<212> DNA
<213> synthetic construct

<400> 2632
agatttgcca gaacatgaat 20

<210> 2633
<211> 20
<212> DNA
<213> synthetic construct

<400> 2633
tgttgcattt agtctttcca 20

<210> 2634
<211> 25
<212> DNA
<213> synthetic construct

<400> 2634
atatcaggaa agattggaaa tacgg 25

<210> 2635
<211> 23
<212> DNA
<213> synthetic construct

<400> 2635
aaagaggtat agcccattct gca 23

<210> 2636
<211> 21
<212> DNA
<213> synthetic construct

<400> 2636
aagatacgga aggaatgtct c 21

<210> 2637
<211> 20
<212> DNA
<213> synthetic construct

<400> 2637
acaaagatgt tgctgtctcc 20

<210> 2638
<211> 25
<212> DNA
<213> synthetic construct

<400> 2638
acacagtcaa aactttatta cttca 25

<210> 2639
<211> 24
<212> DNA
<213> synthetic construct

<400> 2639
caacaagttt attttctgta gttt 24

<210> 2640
<211> 20
<212> DNA
<213> synthetic construct

<400> 2640
cgtttaccaa aggagaaggt 20

<210> 2641
<211> 20
<212> DNA
<213> synthetic construct

<400> 2641
tgtttagcca attatcagca 20

<210> 2642
<211> 22
<212> DNA
<213> synthetic construct

<400> 2642
gtgattacag aaatgaaagc ag 22

<210> 2643
<211> 27
<212> DNA
<213> synthetic construct

<400> 2643
agatatatta ccttatcagt attgtca 27

<210> 2644
<211> 20
<212> DNA
<213> synthetic construct

<400> 2644
gacagatttt cgatccctta 20

<210> 2645
<211> 20
<212> DNA
<213> synthetic construct

<400> 2645
ccttttgtt ttgatgcact 20

<210> 2646
<211> 30
<212> DNA
<213> synthetic construct

<400> 2646
gatataggat acaaaataga agttgattgg 30

<210> 2647
<211> 26
<212> DNA
<213> synthetic construct

<400> 2647
ggtctttttc tgttaattca taaccg 26

<210> 2648
<211> 19
<212> DNA
<213> synthetic construct

<400> 2648
catttaacga cgaaactgg 19

<210> 2649
<211> 20
<212> DNA
<213> synthetic construct

<400> 2649
aattgtttac tttggcgtgt 20

<210> 2650
<211> 20
<212> DNA
<213> synthetic construct

<400> 2650
ccagaaaaac cctaaagaca 20

<210> 2651
<211> 20
<212> DNA
<213> synthetic construct

<400> 2651
aaagaacacg atattcacgg 20

<210> 2652
<211> 20
<212> DNA
<213> synthetic construct

<400> 2652
gtccgaatcc tatgaaaatg 20

<210> 2653
<211> 22
<212> DNA
<213> synthetic construct

<400> 2653
gcagctgatt tattgtatct tg 22

<210> 2654
<211> 20
<212> DNA
<213> synthetic construct

<400> 2654
cattagcagg aggatgtttc 20

<210> 2655
<211> 19

<212> DNA
<213> synthetic construct

<400> 2655
tgaaccacgt tgatattgg 19

<210> 2656
<211> 26
<212> DNA
<213> synthetic construct

<400> 2656
gcatataaat atcaaaacca tacaag 26

<210> 2657
<211> 18
<212> DNA
<213> synthetic construct

<400> 2657
tttcaatgcc atcgtttc 18

<210> 2658
<211> 20
<212> DNA
<213> synthetic construct

<400> 2658
ggtcttgtct atggcttcac 20

<210> 2659
<211> 20
<212> DNA
<213> synthetic construct

<400> 2659
cattccttct tgcatttctc 20

<210> 2660
<211> 20
<212> DNA
<213> synthetic construct

<400> 2660
gttgagaatg ggagagactg 20

<210> 2661
<211> 18
<212> DNA
<213> synthetic construct

<400> 2661
aacgtcgcga ttctaggt 18

<210> 2662
<211> 24
<212> DNA
<213> synthetic construct

<400> 2662
actaagaaaa tcgtagctat ttgg 24

<210> 2663
<211> 20
<212> DNA
<213> synthetic construct

<400> 2663
acttcctttc tcttgcgata 20

<210> 2664
<211> 20
<212> DNA
<213> synthetic construct

<400> 2664
caattacctt ggcacttacc 20

<210> 2665
<211> 20
<212> DNA
<213> synthetic construct

<400> 2665
ccctttteta cgcactaaat 20

<210> 2666
<211> 19
<212> DNA
<213> synthetic construct

<400> 2666
tggaatgggt agcttcttc 19

<210> 2667
<211> 19
<212> DNA
<213> synthetic construct

<400> 2667

gggaaacaca agacagacc 19

<210> 2668
<211> 22
<212> DNA
<213> synthetic construct

<400> 2668
gataaccatc acaaacagaa tg 22

<210> 2669
<211> 21
<212> DNA
<213> synthetic construct

<400> 2669
ttatttgaac caacaaacga c 21

<210> 2670
<211> 22
<212> DNA
<213> synthetic construct

<400> 2670
agaaaattgg gatagaaaag aa 22

<210> 2671
<211> 18
<212> DNA
<213> synthetic construct

<400> 2671
ctgcaaggca actggtat 18

<210> 2672
<211> 19
<212> DNA
<213> synthetic construct

<400> 2672
ttagcactct atgcgacga 19

<210> 2673
<211> 21
<212> DNA
<213> synthetic construct

<400> 2673
aatacaccaa gaaatgcaag a 21

<210> 2674
<211> 19
<212> DNA
<213> synthetic construct

<400> 2674
cacctgcgag tacaaactg 19

<210> 2675
<211> 19
<212> DNA
<213> synthetic construct

<400> 2675
cccacaaaga actccaatc 19

<210> 2676
<211> 20
<212> DNA
<213> synthetic construct

<400> 2676
gacaaaggta caacgaggac 20

<210> 2677
<211> 20
<212> DNA
<213> synthetic construct

<400> 2677
gcacttccat gataaagagg 20

<210> 2678
<211> 19
<212> DNA
<213> synthetic construct

<400> 2678
tcttatggca gtacgcaac 19

<210> 2679
<211> 20
<212> DNA
<213> synthetic construct

<400> 2679
ccagtttccc gttttctaat 20

<210> 2680

<211> 18
<212> DNA
<213> synthetic construct

<400> 2680
gtgcggtatt gggaaaca 18

<210> 2681
<211> 18
<212> DNA
<213> synthetic construct

<400> 2681
cggccgttat cttgtaaa 18

<210> 2682
<211> 20
<212> DNA
<213> synthetic construct

<400> 2682
aagtgtgggc attactgttt 20

<210> 2683
<211> 18
<212> DNA
<213> synthetic construct

<400> 2683
ccttgcttca tctctcca 18

<210> 2684
<211> 21
<212> DNA
<213> synthetic construct

<400> 2684
acgagaatta tacggttttc a 21

<210> 2685
<211> 20
<212> DNA
<213> synthetic construct

<400> 2685
atcaatggtg tcgttcattt 20

<210> 2686
<211> 21
<212> DNA

<213> synthetic construct

<400> 2686
gaattctact tgtcgaggat g 21

<210> 2687
<211> 18
<212> DNA
<213> synthetic construct

<400> 2687
tctgcctctg catcaaac 18

<210> 2688
<211> 18
<212> DNA
<213> synthetic construct

<400> 2688
aatgatccga gggaaact 18

<210> 2689
<211> 21
<212> DNA
<213> synthetic construct

<400> 2689
tttgttagcg ttatcgtttg t 21

<210> 2690
<211> 20
<212> DNA
<213> synthetic construct

<400> 2690
acatgagttg gaggaaacac 20

<210> 2691
<211> 20
<212> DNA
<213> synthetic construct

<400> 2691
tacgatggca agtcctaaac 20

<210> 2692
<211> 19
<212> DNA
<213> synthetic construct

<400> 2692
ggcagcaaag accttaaac 19

<210> 2693
<211> 18
<212> DNA
<213> synthetic construct

<400> 2693
tcattggttc tcctcctg 18

<210> 2694
<211> 20
<212> DNA
<213> synthetic construct

<400> 2694
gaagatggaa caattcaagg 20

<210> 2695
<211> 21
<212> DNA
<213> synthetic construct

<400> 2695
tttcccacag taaaggatac a 21

<210> 2696
<211> 19
<212> DNA
<213> synthetic construct

<400> 2696
tacagtctat ccgggcatt 19

<210> 2697
<211> 20
<212> DNA
<213> synthetic construct

<400> 2697
tgttgtcggg atcaattact 20

<210> 2698
<211> 20
<212> DNA
<213> synthetic construct

<400> 2698
tgggataact tcacaggaaa 20

<210> 2699
<211> 19
<212> DNA
<213> synthetic construct

<400> 2699
ggtatggctc atcaatcaa 19

<210> 2700
<211> 27
<212> DNA
<213> synthetic construct

<400> 2700
atacttaggt tatgactacg ttaatga 27

<210> 2701
<211> 19
<212> DNA
<213> synthetic construct

<400> 2701
aaatgaaccc gtatttcca 19

<210> 2702
<211> 20
<212> DNA
<213> synthetic construct

<400> 2702
gtgcgttcat tatttcgttc 20

<210> 2703
<211> 20
<212> DNA
<213> synthetic construct

<400> 2703
gccatctata aacctcgttg 20

<210> 2704
<211> 20
<212> DNA
<213> synthetic construct

<400> 2704
ttgtctggta tcccctatgt 20

<210> 2705
<211> 20
<212> DNA
<213> synthetic construct

<400> 2705
aaaagatcaa cacgagcaag 20

<210> 2706
<211> 25
<212> DNA
<213> synthetic construct

<400> 2706
aggattgcta gctttatatt tagtg 25

<210> 2707
<211> 22
<212> DNA
<213> synthetic construct

<400> 2707
atttattctt aaatgggtac gg 22

<210> 2708
<211> 20
<212> DNA
<213> synthetic construct

<400> 2708
aagctgcctt atgtaggttg 20

<210> 2709
<211> 18
<212> DNA
<213> synthetic construct

<400> 2709
agcaccgaca gtcaaaga 18

<210> 2710
<211> 19
<212> DNA
<213> synthetic construct

<400> 2710
gacatacgag ttggctgaa 19

<210> 2711
<211> 19

<212> DNA
<213> synthetic construct

<400> 2711
ctattggggt atggttcgt 19

<210> 2712
<211> 20
<212> DNA
<213> synthetic construct

<400> 2712
cctttgaagc tggtactgac 20

<210> 2713
<211> 19
<212> DNA
<213> synthetic construct

<400> 2713
ctgtgaaccg tcttgattg 19

<210> 2714
<211> 22
<212> DNA
<213> synthetic construct

<400> 2714
tgtcgaagtt tttcattgat ag 22

<210> 2715
<211> 18
<212> DNA
<213> synthetic construct

<400> 2715
aaggtcacgg tgatggtc 18

<210> 2716
<211> 23
<212> DNA
<213> synthetic construct

<400> 2716
caatggttac aggttgtgga aga 23

<210> 2717
<211> 24
<212> DNA
<213> synthetic construct

<400> 2717
gcccactaca gattcttcag ctac 24

<210> 2718
<211> 18
<212> DNA
<213> synthetic construct

<400> 2718
ctcttagacg ccctgtcc 18

<210> 2719
<211> 19
<212> DNA
<213> synthetic construct

<400> 2719
gtttccgaga aggtgattg 19

<210> 2720
<211> 19
<212> DNA
<213> synthetic construct

<400> 2720
catcgtcaac ataacctcg 19

<210> 2721
<211> 19
<212> DNA
<213> synthetic construct

<400> 2721
aattcttgcg gtttctttc 19

<210> 2722
<211> 26
<212> DNA
<213> synthetic construct

<400> 2722
gaggtgtaat tatgattcag actatt 26

<210> 2723
<211> 24
<212> DNA
<213> synthetic construct

<400> 2723

tcgtaccaac taatttagac aatc 24

<210> 2724
<211> 18
<212> DNA
<213> synthetic construct

<400> 2724
ctcgacccga tctacgtc 18

<210> 2725
<211> 18
<212> DNA
<213> synthetic construct

<400> 2725
gtcttcacct cgacaccc 18

<210> 2726
<211> 25
<212> DNA
<213> synthetic construct

<400> 2726
tgtcatcata gctcttaaca taatc 25

<210> 2727
<211> 18
<212> DNA
<213> synthetic construct

<400> 2727
ctaaacgcca agcacaag 18

<210> 2728
<211> 18
<212> DNA
<213> synthetic construct

<400> 2728
gaccaggagt tggtggtt 18

<210> 2729
<211> 19
<212> DNA
<213> synthetic construct

<400> 2729
aacagctgac aaatcaacg 19

<210> 2730
<211> 20
<212> DNA
<213> synthetic construct

<400> 2730
ctggctctgt tagtgctttc 20

<210> 2731
<211> 21
<212> DNA
<213> synthetic construct

<400> 2731
ctgttaccgt tgatttacct g 21

<210> 2732
<211> 20
<212> DNA
<213> synthetic construct

<400> 2732
cctgaaatcc actactgacc 20

<210> 2733
<211> 18
<212> DNA
<213> synthetic construct

<400> 2733
ccaacgacag ttccactc 18

<210> 2734
<211> 20
<212> DNA
<213> synthetic construct

<400> 2734
gaaatgatat tgacgggact 20

<210> 2735
<211> 19
<212> DNA
<213> synthetic construct

<400> 2735
tcaacacaag gacaggttg 19

<210> 2736

<211> 18
<212> DNA
<213> synthetic construct

<400> 2736
aaggctggct ttttcttg 18

<210> 2737
<211> 21
<212> DNA
<213> synthetic construct

<400> 2737
aattatgagc cccatacc ta c 21

<210> 2738
<211> 20
<212> DNA
<213> synthetic construct

<400> 2738
attagaaatt gcgactggtg 20

<210> 2739
<211> 20
<212> DNA
<213> synthetic construct

<400> 2739
agcgtgtcat atccttcatc 20

<210> 2740
<211> 27
<212> DNA
<213> synthetic construct

<400> 2740
ttggatagtt caacaaaaac attaaca 27

<210> 2741
<211> 27
<212> DNA
<213> synthetic construct

<400> 2741
catttttatc ttctgttacc actggtt 27

<210> 2742
<211> 18
<212> DNA

<213> synthetic construct

<400> 2742
tgagcagcgt aaccagac 18

<210> 2743
<211> 19
<212> DNA
<213> synthetic construct

<400> 2743
agtcatccac gttcctttc 19

<210> 2744
<211> 20
<212> DNA
<213> synthetic construct

<400> 2744
atgaaaaacc ctcatcaaaa 20

<210> 2745
<211> 20
<212> DNA
<213> synthetic construct

<400> 2745
gggaaaaaga ccaaaggtaa 20

<210> 2746
<211> 20
<212> DNA
<213> synthetic construct

<400> 2746
agaacatatc cgcaaacaag 20

<210> 2747
<211> 21
<212> DNA
<213> synthetic construct

<400> 2747
tgatgtaaac aaaatcgttc c 21

<210> 2748
<211> 21
<212> DNA
<213> synthetic construct

<400> 2748
aaccgtttat acgttggtga g 21

<210> 2749
<211> 18
<212> DNA
<213> synthetic construct

<400> 2749
gattaacgcc tgcatcac 18

<210> 2750
<211> 18
<212> DNA
<213> synthetic construct

<400> 2750
atgttctcgc tgcagttc 18

<210> 2751
<211> 23
<212> DNA
<213> synthetic construct

<400> 2751
accaaaactt tattttcatc atc 23

<210> 2752
<211> 22
<212> DNA
<213> synthetic construct

<400> 2752
ataaagcaat gaagcctaaa gt 22

<210> 2753
<211> 20
<212> DNA
<213> synthetic construct

<400> 2753
tttacgatca aggaaccatc 20

<210> 2754
<211> 20
<212> DNA
<213> synthetic construct

<400> 2754
ggttacttgt tgctgctttt 20

<210> 2755
<211> 19
<212> DNA
<213> synthetic construct

<400> 2755
cgtaatcgca atcgaaata 19

<210> 2756
<211> 18
<212> DNA
<213> synthetic construct

<400> 2756
gaactacccc gtgaatcc 18

<210> 2757
<211> 18
<212> DNA
<213> synthetic construct

<400> 2757
cactggtcga ggagatgc 18

<210> 2758
<211> 18
<212> DNA
<213> synthetic construct

<400> 2758
gcaaggaccg ttctatca 18

<210> 2759
<211> 20
<212> DNA
<213> synthetic construct

<400> 2759
cttcaatgac gtgtaaacca 20

<210> 2760
<211> 20
<212> DNA
<213> synthetic construct

<400> 2760
tacgatgaca ccagtctttg 20

<210> 2761
<211> 20
<212> DNA
<213> synthetic construct

<400> 2761
atcgacaaaa cgtacaggat 20

<210> 2762
<211> 20
<212> DNA
<213> synthetic construct

<400> 2762
tagcaacctc cctttgatac 20

<210> 2763
<211> 24
<212> DNA
<213> synthetic construct

<400> 2763
acaaaagata tgtgtgaagt tacc 24

<210> 2764
<211> 18
<212> DNA
<213> synthetic construct

<400> 2764
gcgtagaacg tggacttg 18

<210> 2765
<211> 20
<212> DNA
<213> synthetic construct

<400> 2765
tcataaatgg accgaatacc 20

<210> 2766
<211> 18
<212> DNA
<213> synthetic construct

<400> 2766
atggcttgtt ctgctgct 18

<210> 2767
<211> 26

<212> DNA
<213> synthetic construct

<400> 2767
ttatttcaag ttagtgaaat cagttt 26

<210> 2768
<211> 20
<212> DNA
<213> synthetic construct

<400> 2768
ctaagatgtc gtcgcaagat 20

<210> 2769
<211> 22
<212> DNA
<213> synthetic construct

<400> 2769
tttcttcatg ttcatatgga tt 22

<210> 2770
<211> 25
<212> DNA
<213> synthetic construct

<400> 2770
gctgaattat ctaaattacc aagag 25

<210> 2771
<211> 19
<212> DNA
<213> synthetic construct

<400> 2771
tgcagtaaca agcatccac 19

<210> 2772
<211> 22
<212> DNA
<213> synthetic construct

<400> 2772
ggtggtaaat taagagattt gg 22

<210> 2773
<211> 20
<212> DNA
<213> synthetic construct

<400> 2773
aggatttctg gtttgaaagg 20

<210> 2774
<211> 20
<212> DNA
<213> synthetic construct

<400> 2774
tcatggatta tttgttcgtg 20

<210> 2775
<211> 21
<212> DNA
<213> synthetic construct

<400> 2775
ccatatcttt gagcaactgt g 21

<210> 2776
<211> 19
<212> DNA
<213> synthetic construct

<400> 2776
aaacggtcca gagttgaag 19

<210> 2777
<211> 20
<212> DNA
<213> synthetic construct

<400> 2777
ctctcaaaga accagacacc 20

<210> 2778
<211> 21
<212> DNA
<213> synthetic construct

<400> 2778
tgttattggt tatggtgttg g 21

<210> 2779
<211> 20
<212> DNA
<213> synthetic construct

<400> 2779

cggtgatttc taatggtctc 20

<210> 2780
<211> 19
<212> DNA
<213> synthetic construct

<400> 2780
attccttggt ttggttctg 19

<210> 2781
<211> 22
<212> DNA
<213> synthetic construct

<400> 2781
gtctccaata atgaggtaaa gg 22

<210> 2782
<211> 20
<212> DNA
<213> synthetic construct

<400> 2782
gctctttgct tcaattatcc 20

<210> 2783
<211> 20
<212> DNA
<213> synthetic construct

<400> 2783
ataaaccacc caagaacaac 20

<210> 2784
<211> 25
<212> DNA
<213> synthetic construct

<400> 2784
atccaagttg aaagagataa attga 25

<210> 2785
<211> 20
<212> DNA
<213> synthetic construct

<400> 2785
ttccccttca agtttaccta 20

```
<210>  2786
<211>  16
<212>  DNA
<213>  synthetic construct

<400>  2786
agaggcccgt ttgaag                                                     16


<210>  2787
<211>  16
<212>  DNA
<213>  synthetic construct

<400>  2787
gctcaagggg caaatg                                                     16


<210>  2788
<211>  17
<212>  DNA
<213>  synthetic construct

<400>  2788
tcggagtcaa cggattt                                                    17


<210>  2789
<211>  16
<212>  DNA
<213>  synthetic construct

<400>  2789
ccacgacgta ctcagc                                                     16


<210>  2790
<211>  20
<212>  DNA
<213>  synthetic construct

<400>  2790
atggatgatg atatcgccgc                                                 20


<210>  2791
<211>  19
<212>  DNA
<213>  synthetic construct

<400>  2791
gtgtggtgcc agattttct                                                  19


<210>  2792
```

<211> 18
<212> DNA
<213> synthetic construct

<400> 2792
gccaaattgc caaaactc 18

<210> 2793
<211> 16
<212> DNA
<213> synthetic construct

<400> 2793
cacaacacga agaccg 16

<210> 2794
<211> 18
<212> DNA
<213> synthetic construct

<400> 2794
caccctggat ttgcatac 18

<210> 2795
<211> 17
<212> DNA
<213> synthetic construct

<400> 2795
acatctgatc cgttcct 17

<210> 2796
<211> 25
<212> DNA
<213> synthetic construct

<400> 2796
atccaagttg aaagagataa attga 25

<210> 2797
<211> 20
<212> DNA
<213> synthetic construct

<400> 2797
ttccccttca agtttaccta 20

<210> 2798
<211> 18
<212> DNA

<213> synthetic construct

<400> 2798
caggcctaac acatgcaa 18

<210> 2799
<211> 19
<212> DNA
<213> synthetic construct

<400> 2799
gaccgtgtct cagttccag 19

<210> 2800
<211> 20
<212> DNA
<213> synthetic construct

<400> 2800
aggataggta ggagccgtag 20

<210> 2801
<211> 20
<212> DNA
<213> synthetic construct

<400> 2801
agatgctttc agcgtttatc 20

<210> 2802
<211> 19
<212> DNA
<213> synthetic construct

<400> 2802
gcgtgagtga aagaaggtt 19

<210> 2803
<211> 20
<212> DNA
<213> synthetic construct

<400> 2803
cagtttccaa agcgtacatt 20

<210> 2804
<211> 18
<212> DNA
<213> synthetic construct

<400> 2804
ccacactggg actgagac 18

<210> 2805
<211> 19
<212> DNA
<213> synthetic construct

<400> 2805
gctcgggacc tacgtatta 19

<210> 2806
<211> 18
<212> DNA
<213> synthetic construct

<400> 2806
cacggcccag actcctac 18

<210> 2807
<211> 19
<212> DNA
<213> synthetic construct

<400> 2807
cccaataaat ccggacaac 19

<210> 2808
<211> 21
<212> DNA
<213> synthetic construct

<400> 2808
gtgcattagc tagttggtga g 21

<210> 2809
<211> 19
<212> DNA
<213> synthetic construct

<400> 2809
ataccgtcaa gggatgaac 19

<210> 2810
<211> 19
<212> DNA
<213> synthetic construct

<400> 2810
tgcctataca tgcaagtcg 19

<210> 2811
<211> 18
<212> DNA
<213> synthetic construct

<400> 2811
ctatgcatcg tggccttg 18

<210> 2812
<211> 18
<212> DNA
<213> synthetic construct

<400> 2812
ggcgtgccta atacatgc 18

<210> 2813
<211> 18
<212> DNA
<213> synthetic construct

<400> 2813
ctatgcatcg tcgccttg 18

<210> 2814
<211> 18
<212> DNA
<213> synthetic construct

<400> 2814
caggcctaac acatgcaa 18

<210> 2815
<211> 18
<212> DNA
<213> synthetic construct

<400> 2815
atcccatctg ggcacatc 18

<210> 2816
<211> 19
<212> DNA
<213> synthetic construct

<400> 2816
acacggtcca gactcctac 19

<210> 2817
<211> 20
<212> DNA
<213> synthetic construct

<400> 2817
aattaaacca catgctccac 20

<210> 2818
<211> 20
<212> DNA
<213> synthetic construct

<400> 2818
gcattagcta gttggtgagg 20

<210> 2819
<211> 18
<212> DNA
<213> synthetic construct

<400> 2819
gtcaggggac gttcagtt 18

<210> 2820
<211> 18
<212> DNA
<213> synthetic construct

<400> 2820
cgtgcctaat acatgcaa 18

<210> 2821
<211> 18
<212> DNA
<213> synthetic construct

<400> 2821
cgatcaccct ctcaggtc 18

<210> 2822
<211> 23
<212> DNA
<213> synthetic construct

<400> 2822
acacgtgggt aacctaccta taa 23

<210> 2823
<211> 18

<212> DNA
<213> synthetic construct

<400> 2823
ccgatcaccc tctcaggt 18

<210> 2824
<211> 22
<212> DNA
<213> synthetic construct

<400> 2824
cctttaggtg tattggtagg ag 22

<210> 2825
<211> 19
<212> DNA
<213> synthetic construct

<400> 2825
atcgtctgca ttccttagc 19

<210> 2826
<211> 18
<212> DNA
<213> synthetic construct

<400> 2826
caggcctaac acatgcaa 18

<210> 2827
<211> 18
<212> DNA
<213> synthetic construct

<400> 2827
agtcccagtg tggctgat 18

<210> 2828
<211> 18
<212> DNA
<213> synthetic construct

<400> 2828
tggttgatca tggctcag 18

<210> 2829
<211> 18
<212> DNA
<213> synthetic construct

<400> 2829
aagagcccct gctttggt 18

<210> 2830
<211> 19
<212> DNA
<213> synthetic construct

<400> 2830
tctctgatgt tagcggcgg 19

<210> 2831
<211> 17
<212> DNA
<213> synthetic construct

<400> 2831
tcaggctttc gcccatt 17

<210> 2832
<211> 20
<212> DNA
<213> synthetic construct

<400> 2832
ctaacacatg caagtcgaac 20

<210> 2833
<211> 18
<212> DNA
<213> synthetic construct

<400> 2833
cacatccgat ggcaagag 18

<210> 2834
<211> 17
<212> DNA
<213> synthetic construct

<400> 2834
ataggtcggc ggttcat 17

<210> 2835
<211> 20
<212> DNA
<213> synthetic construct

<400> 2835

cccgagtatc tggaagacag 20

<210> 2836
<211> 22
<212> DNA
<213> synthetic construct

<400> 2836
ctaaaattgg tgaaggtgca gc 22

<210> 2837
<211> 22
<212> DNA
<213> synthetic construct

<400> 2837
atatggtggt tcagattctg cc 22

<210> 2838
<211> 21
<212> DNA
<213> synthetic construct

<400> 2838
ccttagttat ctcggtgcca g 21

<210> 2839
<211> 22
<212> DNA
<213> synthetic construct

<400> 2839
ggaagccaca ctgctacaca gg 22

<210> 2840
<211> 22
<212> DNA
<213> synthetic construct

<400> 2840
ccaccggttt aacttggaat cc 22

<210> 2841
<211> 22
<212> DNA
<213> synthetic construct

<400> 2841
aattgatggt acacgaccag tg 22

<210> 2842
<211> 240
<212> DNA
<213> Streptococcus dysgalactiae

<400> 2842
ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag ggaatcttcg 60

gcaatggacg gaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt tcggatcgta 120

aagctctgtt gttagagaag aatgatggtg ggagtggaaa atccaccatg tgacggtaac 180

taaccagaaa gggacggcta actacgtgcc agcagccgcg gtaatacgta ggtcccgagc 240

<210> 2843
<211> 290
<212> DNA
<213> Acinetobacter baumannii

<400> 2843
ggtaccaagt atgatatgga tatggacaat aaattagcat atctgaatgc tgaaattcgc 60

ccttggggtg ctagcacgaa tccatgggct caaggtttat atgtagctgc aggtgcagct 120

tatgttgata accaatatga tttaacaaaa aatgtaggta caaacgcttc cgttgaaatt 180

gatggaaacc gttttaatgg tggtgctaac ggagtgagca ttgccggtaa tttaaaatat 240

gataatgata ttgctccata tattggtttt ggttttgctc caaaattcag 290

<210> 2844
<211> 536
<212> DNA
<213> Acinetobacter baumannii

<400> 2844
cttatcgaaa cgcttacgtc tgaatcatgc atatgggcaa ttaattgctc ttatttttgt 60

gcccattatg attttaacgt gtgttggggc ttttctggtt ttaactgaaa catcacgttc 120

tgcaaagcaa caacaattgc atcatgcctc agcgattttg gcacgctaca atcaaattgc 180

taaagatctc tacacattag tagaactaca accagatgaa tatgatcatg ctcaacatat 240

tatgcaaagt atgtttagcg agaaaaatct aaagcgtgct gctttaattg atagtaatgg 300

tcagacttat ttaagtatcg gttatcgaga taatcgttac tggcctaact tcacacaaaa 360

caataacttt tttggtccga tctcttataa ccataataat atttatggag tccgtatcat 420

tgataccgca gggaagcccc ctgtctggct cttgattgaa atggataatc aaccacttga 480

attagcgcgt tatcgcattc tgattgcttt ggtcattacc ggcctaatga ctttat 536

<210> 2845
<211> 529
<212> DNA
<213> Acinetobacter baumannii

<400> 2845
cacagcaaca aactactcaa aatttaattg cagagctttt ggaaaagcac aacattacag 60

gattagtaaa tgcagcgggc gtattaatta tgcgttctat gcttgaagca aaaccggaag 120

attggcaaac actttttgcg gtgaatgtca tggcacccat cgcaattagt caacaacttg 180

ccaagcactt ttgtgaaaaa aaacagggaa gtattgtcac tattagctca aatagtgcac 240

gtatgccacg tatgcagctc ggcatgtatg caacgagtaa agcggcactg agtcattact 300

gccgtaatct tgcacttgaa atcgcacctc atcaagtcag actcaatatc gtttcgccag 360

gttctacttt aacgcaaatg caacaacagc tttggacaga caattcgcct ccacctgctg 420

ttattgatgg cgacttaaac cagtaccgca ctggcattcc acttagaaaa cttgcccagc 480

ctgaagatat cgctaatacc gttagctttt tactttcaga ccaagcagc 529

<210> 2846
<211> 414
<212> DNA
<213> Acinetobacter baumannii

<400> 2846
tgagtattcc caaaattgct agctacagta tgcctcaagc ccatgagttt acgcccaata 60

aaacccattg gcagttacat accaatcgcg ccgtgttact ggtccatgac atgcagcagt 120

attttttaga tttttatgac caaactcaag cacctattcc agagctcatt agaaatacca 180

aagaactgat taaaaccgca cgtaaattta atattccagt ggtttatact gcacagcccg 240

gtaatcagac gcctgaacac cgtcaactat tgaccgattt ttggggaacc gggttaaaag 300

atgatccgta tattactcag attttgccgg aaatctcgcc tcagaaaaat gatactgttt 360

taacaaaatg gcgttatagc gcatttaagt tttccccact tgaacaactc atgc 414

<210> 2847
<211> 500
<212> DNA
<213> Acinetobacter baumannii

<400> 2847
gcacattggg ataatgagac acaaaatgct tttgttgaat taaagcaaaa acttaatgac 60

caatggaatg ctaaactgac ttacaactat cttgatacga agcataatag ccgtcttctc 120

tattactatg gttatccaaa atctgatggg tccggtgttt ctctaacgcc ttggggtgga 180

caagaacatc aagaaaaaca tgctgtagat tttaatctcg aagggaccta taagctattt 240

aaccgagaac atgaagcaac tctaggctac agctatgtac gtaatcatca acaagataaa 300

caatctacag gaacgattaa cgatagtaac gttataaagt caactactac cgattgggca 360

agttggacac cgcaatctat aacttggtca gatttcacag aagcggccaa ctataaacaa 420

aatattaact caatttatgc cgcgacacgt ttacatctta atgaagattt aaaactttta 480

cttggtgcaa actatgttca 500

<210> 2848
<211> 561
<212> DNA
<213> Acinetobacter baumannii

<400> 2848
tgtatctcga tttggttgtg aaccaatatt cggtccagca agttgtgcca gtgattgtga 60

aaaatgatga gtacttcata caaaaaaaga agctgattga tgaattagaa attaacatcc 120

ctcaagagtt attaacaaac actgacacat ctttatcgaa tcaagatgtt ttgaccttgg 180

ggtttagtgg tgatgcgagt gattggatat ctttagataa attaaaagat gtaagctatg 240

aatatcaatc ttcgaaccaa tactttaagc tcaattttcc gcccgcttgg atgcccactc 300

aagttttggg taaagactca tggtataagc cggaagtcgc tcagtctggt atagggctgc 360

tcaataacta tgatttttat acatatagac cctatcaagg cggttcaacc agtagtttat 420

ttactgagca gcgtttttttc tctccgttag gggtcattaa aaactctggt gtctatgtca 480

aaaaccaata caaaaatgaa ggtaacgccg agtctgtaga taatgacggc tatcgtcgtt 540

atgacacatc ttggcagttt g 561

<210> 2849
<211> 501
<212> DNA
<213> Acinetobacter baumannii

<400> 2849
tcacttgtta cacctgtgat ggcacaagca acttttctaa tttggccgat ttatccaaaa 60

attgaagcca atgaaaaggc aactgcggtt tggcttcaaa atacgggtaa gaccgatgcg 120

atggtgcaaa ttcgggtatt taaatggaat caagatggct taaaagataa ctatagtgag 180

caatcagaaa ttataccaag cccgcctgta gctaaaatta aagcaggcga gaagcatatg 240

cttcgcttaa ccaaaagcgt caatttgccg gatggcaaag agcagtcata tcgtctgatt 300

gtagatgagt tgccgatccg actttctgat ggcaacgagc aagatgcttc taaagtaagt 360

ttccaaatgc gttactcaat tccattgttt gcttatggga aaggaattgg cagtggatta 420

accgaagaaa gtcaaaaact taatgcaaaa aatgctttag caaaaccggt tttacagtgg 480

tcagttcgca ataatcaaca a 501

<210> 2850
<211> 501
<212> DNA
<213> Acinetobacter baumannii

<400> 2850
attgatcgaa atcaccaaaa tggaggatcc atcatgatcc ttcggcataa taatttatgc 60

aaaagtattt tgctgatttt attgtcgggt ggatgtttaa atattccaaa tactgtgttt 120

gcaggcgatt tgcctccacc accaagagac attaatgaaa ttaatcaact ttttaaactg 180

tatctcgatt tggttgtgaa ccaatattcg gtccagcaag ttgtgccagt gattgtgaaa 240

aatgatgagt acttcataca aaaaaagaag ctgattgatg aattagaaat taacatccct 300

caagagttat taacaaacac tgacacatct ttatcgaatc aagatgtttt gaccttgggg 360

tttagtggtg atgcgagtga ttggatatct ttagataaat taaaagatgt aagctatgaa 420

tatcaatctt cgaaccaata ctttaagctc aattttccgc ccgcttggat gcccactcaa 480

gttttgggta aagactcatg g 501

<210> 2851
<211> 515
<212> DNA
<213> Acinetobacter baumannii

<400> 2851
gcactggttg aaactgaact ctggccaaat ttaatcgatc aagccaaatt acagcatgta 60

ccttgtttgc tgcttaatgc tcggttgtca gaaaaatctg caaaaggata tggcaaagtc 120

tcgggtttaa ccgcaggtat gttaaaacag ctggactggg tgttagctca agatagtgca 180

actcgtcagc gttatgttga gcttggttta gacgaacaca aaagtcaggt cgttggtaat 240

attaagtttg atattcatgc gccagaggct tttattaaac aagctgccca attgcatcag 300

caatggtatc tggaaaatcg gcaggttgtg acgattgcca gtacacatgc acccgaagaa 360

caacaaattt tggaagcact cgcaccttat ttaaattcag atcgtgagtt ggtgtgtatt 420

gtggtgcctc gtcatcctga gcgtttcgat gaagtatttg aaatttgcca aaatttaaat 480

ttaattacgc atcgtagaag tatgggccaa agtat 515

<210> 2852
<211> 454
<212> DNA
<213> Acinetobacter baumannii

<400> 2852
gctatctgtt agtcaattta tatatgcagc agatcctcag ctcaattcaa gttttaaagt 60

acaagctaaa attgaaaatg gctgttcaat agataatatt gagcaaaaca tggattttgg 120

taaatactct gctttatcaa aaaataaagt agtgactaat attattaata gcaaaggttc 180

ttggaatatc cgttgtacgg aaagtttacc tgtaagtgtt tctatagatg gtggtgaaaa 240

ccttcaaaat aatacaagac gtatgaagaa tggttcgtcc actaattatt tatcttacaa 300

gctatataac tctagtagtt tatccaatga atatattgta ggtaataaat atttattgcc 360

tgctacaaca cctacaaacc gtctggcaaa ttttgaaata tatggtgtcg ttgatttaga 420

aaataataat gaaccccata cggccggaat ttat 454

<210> 2853
<211> 517
<212> DNA
<213> Acinetobacter baumannii

<400> 2853
atatgaaaaa cattcagaaa tcacttcttg cagcattaat agttgctggt tatgcggtaa 60

atactcaagc agctgttact ggtcaggttg acgttaaatt aaatatctca acaggctgta 120

ctgtaggtgg tagtcaaact gaaggaaata tgaacaagtt tggtacttta aattttggta 180

aaacttccgg tacttggaac aacgtattaa cagctgaagt tgcttcagca gcaacaggtg 240

gcaatatttc tgtgacttgt gacggaacag atcctgttga ttttacagtc gcaattgacg 300

gtggtgaacg tacagaccgc actttaaaaa atactgcttc tgctgatgta gttgcatata 360

acgtttatcg tgatgctgca cgtacaaacc tttatgttgt aaaccaacca caacagttca 420

ctacagtaag tggccaagct actgccgtac caattttcgg tgcaattgct ccaaacacag 480

gtacaccaaa agcacaaggc gattataaag atactct 517

<210> 2854

<211> 506
<212> DNA
<213> Acinetobacter baumannii

<400> 2854
tttaaatgga gggaagatga tattcaatcg tggttcagca tttataattt cttatttttt 60

aatttcttta gtaaatgcgg gtgaaatcgg agctaaatta actagtcaaa ttgaattatt 120

gccttcttgt tctgttaata ataatgttgt agaaaataat gcaacaaatt taaattttgg 180

aactatagat tttggtgaag ctaccacagc ttttaaaggg gttttagaag ctagtttagt 240

taataatggt aattcaggtt ttcagatcga gtgtgctggt atttcaactg taaaaataat 300

atttggagca ggaaataatg atagtaatat tccagcttca ttttcacaaa attattatca 360

tgctttaagt aatggtagag attttattgc ttataacttg ctctatggtt taaataaaca 420

agtcattaaa gcaaatgaag cttttattct taatgatatg aataataaaa agaatatcga 480

tatttttggt caagcaaccc atgatg 506

<210> 2855
<211> 542
<212> DNA
<213> Acinetobacter baumannii

<400> 2855
gcttccttac gttcctctgc aattcctgtc tctgaccctg cgtccggtct acgcattacc 60

gagatttttt actccttgca gggtgaagca aatgcctctg gcctaccgac tgtatttatt 120

cgtctcacag gttgcccttt acggtgtagt tattgcgaca ccacctattc ttttgaaggt 180

ggcgaacgct tatcacttga gcacattatt gaaacggctg aaaaatatca aacgccttat 240

atttgtgtga ctggcggtga accacttgca caacccaatt gcttaatttt attacaacgt 300

ttatgtgacg ccggttttga tgtttcccta gaaaccagtg gcgctcttga tgtatcaaga 360

gtggatccgc gtgtttcaaa agttctcgac ttaaagaccc caacttctgg tgaagaacat 420

cgtaatctca tcagtaatct tgaccattta acaccgcgtg accaaatcaa atttgtgatt 480

tgtaatcgtg aagactatga atggtcaaaa caacaagttg aacaatatca actgcaaacc 540

aa 542

<210> 2856
<211> 540
<212> DNA
<213> Acinetobacter baumannii

<400> 2856
taggtaatgc tggtgttggt gctttctggc gcttaaacga tgctctatct cttcgtacag 60

aagctcgtgg taacttatac tttgacgaaa aattctggaa ctatacagct cttgctggct 120

taaacgtagt tcttggtggt cacttgaagc ctgctgctcc tgtagtagaa gttgctccag 180

ttgaaccaac tccagttgct ccacaaccac aagagttaac tgaagacctt aacatggaac 240

ttcgtgtgtt ctttgatact aacaaatcaa acatcaaaga ccaatacaag ccagaaatcg 300

ctaaagttgc tgaaaaatta tctgaatacc ctaacgctac tgcacgtatc gaaggtcaca 360

cagataacac tggtccacgt aagttgaacg aacgtttatc tttagctcgt gctaactctg 420

ttaaatcagc tcttgtaaac gaatacaacg ttgacgcttc tcgtttgtct actcaaggtt 480

tcgcttggga tcaaccgatt gctgacaaca aaactaaaga aggtcgtgct atgaaccgtc 540

<210> 2857
<211> 584
<212> DNA
<213> Acinetobacter baumannii

<400> 2857
tcgtgtgtta ttgcttgatg aaccatttgg tgcactagat gctaaggttc gtaaagaatt 60

acgccgctgg ttacgtaact tgcatgatga gctgcatatc acttcaattt tcgtaaccca 120

tgaccaagaa gaggcacttg aagtagccga ccaaattatt gtgatgaata aaggtaacgt 180

cgaacaaatt ggttctccgc gtgaagttta cgaaaaacct gcaacaccat ttgtatttga 240

tttcttgggt caagcaaatc gttttgaagg tgaacatgca agcggtatta tccgtattgg 300

caatgatcgt atcgaattac cgaccacagt tcaggctccg caaggaaaag taattgcttt 360

tgcccgtcct gatgagttac atattcatgc gcaaccacag gcaaatacaa ttgaagcaac 420

ttttgtacgt gaagtctgga ttgctggaaa agtagtggcg gaattacaag atcgtaatgg 480

acgtttaatt gagattgctc tgagcagtga agctgcaaaa caacatgcat ttaaaccaaa 540

tcaaactgtt tgggtaagtg catctcaact tcacctattt gcag 584

<210> 2858
<211> 427
<212> DNA
<213> Acinetobacter baumannii

<400> 2858
atgcctattt ccaatcaaga tttgcgcaaa gctggactta aagttaccct tccacgaatt 60

aagattttgg aattattaga aaattcaaaa caacatcatc ttagcgccga agatatttac 120

aagactttgt tagagcaagg ggaagatgtc ggacttgcga cagtttaccg tgtgttaaca 180

caatttgaag ctgcgggtat tattcaacgt catcattttg aaaataacca ttctgttttc 240

gaaatcatgc aagaagatca tcacgatcac ttagtatgcc aaaactgtaa caaagtcatt 300

gaatttacta atgatgttat cgagaaagaa cagcattctg tagcagaaca acatgggttt 360

accttaacgg gtcactcatt aaatctctat ggttactgta atgaacctga atgtcaggaa 420

gcattgc 427

<210> 2859
<211> 355
<212> DNA
<213> Acinetobacter baumannii

<400> 2859
agatggatgt tgatgctctt gaaaaaacaa tggcgcatct tcaagctgaa ggtaaagttg 60

ttgcttgtgt cgttgcgaca gcgggtacaa ctgatgctgg tgcaattcat ccattgaaaa 120

aaatccgtga aattactaat aagtatggtt catggatgca tatcgatgct gcgtggggcg 180

gtgcactgat cttgtcaaat acctatcgtg caatgcttga tggtattgag ctgtctgatt 240

cgatcactct cgacttccat aagcattatt tccaaagcat cagctgtggc gcgttcttgt 300

taaaagatga agcgaactat cgtttcatgc attatgaagc tgagtacttg aactc 355

<210> 2860
<211> 564
<212> DNA
<213> Acinetobacter baumannii

<400> 2860
gatgaatacc gcccattacg tttgcaaaat ggtttatatg tgcaacgtta tgcaccaatg 60

ctacgtattg ctgtgccgta tggcttaatg aactcaaaac aattacgtaa aattgctgaa 120

gtatcaactc aatatgaccg tggctatgca cacgtatcta cgcgtcaaaa tattcagcta 180

aactggcctg cacttgaaga tgtgccagaa attttagctg aactcgcaac tgtacaaatg 240

catgccattc aaaccagtgg taactgtatt cgtaacacga ctactgacca gtatgcaggt 300

gtagttgctg gtgaaattgc tgatccacgc ccaacatgtg aattgattcg tcagtggagt 360

acattccacc cggaatttgc attcttacca cgtaaattta aaattgccgt ttctgcactt 420

gaagaaaaag accgtgcagc aacagcattc catgatattg gtgtgtatat cgtgcgtaat 480

gaagcaggcg agatgggcta caaaatcatg gtgggtggtg gtttaggccg tactccgatt 540

attggtagtg tcattcgtga gttt 564

<210> 2861
<211> 310
<212> DNA
<213> Acinetobacter baumannii

<400> 2861
tttaaagttc ctacggctaa actcttacca gacttaccaa gttttacggg cggcttggtg 60

ggttatttgg gctacgatgc tgtccgctac atcgagccac gtttaaagaa tgtacctgcg 120

gctgatccga ttacgctgcc agatttatgg ttgatgctct caaagacagt cattgttttt 180

gacaatctta aagatacgct atttttaatt gtgcatgcgg atacagagca gagtaatgct 240

tatgaagacg ctcaacaaaa attagatcaa ttagaacagt tgttggcgac tccagttagt 300

ttgcaagcgc 310

<210> 2862
<211> 530
<212> DNA
<213> Acinetobacter baumannii

<400> 2862
ttaaacgtct tgccgatgac tttaataaag tggacgaagg tactttaacg attgcaacaa 60

cacatactca agcacgttat gtattaccac caatcgtcaa tcaatttaag aaactatttc 120

caaaagttca tttgattttg caacaagcaa gccctgtcga aattgcagaa atgcttttac 180

aaggtgaagc tgatattggc atcgcgacag agtctttaac aactgaagaa aatttagcaa 240

gcattccata ctatcaatgg cagcacagca ttattactcc tcaagatcac ccacttacac 300

agctcgataa aattgatctt gatgctttat ctgaataccc actaattact tatcacggcg 360

gttttacagg tcgttcaaag atcgataaag catttgaaga tgcacaaatt gatgccgata 420

ttgtaatgtc tgctcttgat gccgatgtta tcaaaactta cgttgaactc ggcatgggtg 480

tcggaattgt caatgatgtc gcttacgatg cagagcgtga ctatcgttta 530

<210> 2863
<211> 534
<212> DNA
<213> Acinetobacter baumannii

<400> 2863
cgacgcttta tctcttcgta ctgaagctcg tgctacttat aatgctgatg aagagttctg 60

gaactataca gctcttgctg gcttaaacgt agttcttggt ggtcacttga agcctgctgc 120

tcctgtagta gaagttgctc cagttgaacc aactccagtt gctccacaac cacaagagtt 180

aactgaagac cttaacatgg aacttcgtgt gttctttgat actaacaaat caaacatcaa 240

agaccaatac aagccagaaa ttgctaaagt tgctgaaaaa ttatctgaat accctaacgc 300

tactgcacgt atcgaaggtc acacagataa cactggtcca cgtaagttga acgaacgttt 360

atctttagct cgtgctaact ctgttaaatc agctcttgta aacgaataca acgttgatgc 420

ttctcgtttg tctactcaag gtttcgcttg ggatcaaccg attgctgaca acaaaactaa 480

agaaggtcgt gctatgaacc gtcgtgtatt cgcgacaatc actggtagcc gtac 534

<210> 2864
<211> 336
<212> DNA
<213> Enterobacter cloacae

<400> 2864
ccgacacttg ctgacgtaca ggaacagtac ttgccaagcg ttttagcgca agagtccgtc 60

actccataca ttgcaatgct gaatggagag ccgattgggt atgcccagtc gtacgttgct 120

cttggaagcg gggacggatg gtgggaagaa gaaaccgatc caggagtacg cggaatagac 180

cagtcactgg cgaatgcatc acaactgggc aaaggcttgg gaaccaagct ggttcgagct 240

ctggttgagt tgctgttcaa tgatcccgag gtcaccaaga tccaaacgga cccgtcgccg 300

agcaacttgc gagcgatccg atgctacgag aaagcg 336

<210> 2865
<211> 527
<212> DNA
<213> Acinetobacter baumannii

<400> 2865
gtgaaggcat gagtgttatt cgggccatga atggaaagca agcgattgaa ttgcacgcta 60

gccaacccat cgatttaatc ttacttgata ttaaattacc cgaattaaac ggctgggaag 120

tattaaataa aatacgccaa aaagctcaga ctcccgtgat catgttgacg gcgctagatc 180

aagatattga taaagttatg gcattacgca taggtgcaga tgactttgtg gtgaagcctt 240

ttaacccaaa tgaagtcatc gctagagttc aggcagtctt aagaagaact cagtttgcaa 300

acaaagcaac taataagaat aaaatctata aaaatattga aattgatacc gacactcata 360

gcgtttatat acactctgag aataagaaaa tcttgcttaa tctgacgctg actgaatata 420

aaattatttc attcatgatt gaccaacctc ataaagtttt tacgcgcgga gaacttatga 480

accactgcat gaatgatagc gatgcactag agcgaaccgt agatagc 527

<210> 2866
<211> 588
<212> DNA
<213> Acinetobacter baumannii

<400> 2866
tcagtgtatt aagcattcaa ccgcaatcgg taaattttag tgaaaatctt cctgcacgtg 60

tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc 120

tatttaaaca aggtagtgaa gttagagcag ggcaagcctt atataaaatt aattccgaga 180

cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg 240

caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta 300

agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa 360

tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta 420

tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggt cagggcgata 480

ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg 540

ttagtgagta tgaacgccta caggctgcgc tacaaagcgg cgaattat 588

<210> 2867
<211> 567
<212> DNA
<213> Enterobacter cloacae

<400> 2867
atcgtgacca acagcaacga ttccgtcaca ctgcgcctca tgactgagca tgaccttgcg 60

atgctctatg agtggctaaa tcgatctcat atcgtcgagt ggtggggcgg agaagaagca 120

cgcccgacac ttgctgacgt acaggaacag tacttgccaa gcgttttagc gcaagagtcc 180

gtcactccat acattgcaat gctgaatgga gagccgattg ggtatgccca gtcgtacgtt 240

gctcttggaa gcggggacgg atggtgggaa gaagaaaccg atccaggagt acgcggaata 300

gaccagtcac tggcgaatgc atcacaactg ggcaaaggct tgggaaccaa gctggttcga 360

gctctggttg agttgctgtt caatgatccc gaggtcacca agatccaaac ggacccgtcg 420

ccgagcaact tgcgagcgat ccgatgctac gagaaagcgg ggtttgagag gcaaggtacc 480

gtaaccaccc cagatggtcc agccgtgtac atggttcaaa cacgccaggc attcgagcga 540

acacgcagtg atgcctaacc cttccat 567

<210> 2868
<211> 588
<212> DNA
<213> Acinetobacter baumannii

<400> 2868
tcagtgtatt aagcattcaa ccgcaatcgg taaattttag tgaaaatctt cctgcacgtg 60

tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc 120

tatttaaaca aggtagtgaa gttagagcag ggcaagcctt atataaaatt aattccgaga 180

cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg 240

caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta 300

agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa 360

tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta 420

tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggt cagggcgata 480

ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg 540

ttagtgagta tgaacgccta caggctgcgc tacaaagcgg cgaattat 588

<210> 2869
<211> 588
<212> DNA
<213> Acinetobacter baumannii

<400> 2869
tcagtgtatt aagcattcaa ccgcaatcgg taaattttag tgaaaatctt cctgcacgtg 60

tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc 120

tatttaaaca aggtagtgaa gttagagcag ggcaagcctt atataaaatt aattccgaga 180

cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg 240

caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta 300

agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa 360

tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta 420

tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggt cagggcgata 480

ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg 540

ttagtgagta tgaacgccta caggctgcgc tacaaagcgg cgaattat 588

<210> 2870
<211> 718
<212> DNA
<213> Acinetobacter baumannii

<400> 2870
tgccaattaa cttcttagcc gaagcagcaa aaaaaattag tcacggcgac ctctctgcta 60

gagcttacga taatagaatt cactccgccg aaatgtcgga gcttttatat aattttaatg 120

atatggctca aaagctagag gtttccgtca aaaatgcgca ggtttggaat gcagccatcg 180

cacatgagtt aagaacgcct ataacgatat tacaaggtcg tttacaggga attattgatg 240

gcgtttttaa acctgatgaa gtcctattta aaagtctttt aaatcaaatt gaaggtttat 300

ctcacttagt cgaagactta cggactttaa gcttagtaga gaaccagcaa ctccggttaa 360

attatgaatt gtttgacttt aaggcggtag ttgaaaaagt tcttaaagca tttgaagatc 420

gtttggatca agctaagcta gtaccagaac ttgacctaac gtccactcct gtatattgcg 480

accgccgtcg tattgagcaa gttttaattg ctttaattga taatgcgatt cgctattcaa 540

atgcaggcaa acttaaaatc tcttcagaag tggttgcaga caactggata ttaaaaattg 600

aggatgaagg ccccggcatt gcaaccgagt tccaagacga tttatttaag cctttcttta 660

gattagaaga atcaaggaat aaagaatttg gcggcacagg tttaggtctt gctgttgt 718

<210> 2871
<211> 673
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2871
attcctgcag ttcagtggtg ccgccgttgc gtcctcgctg tttgccccgg cgctggtgca 60

accggtttcc gcctcgtctg gcatacccgc cgcgaacgcc gccattgccg gcgccgccga 120

tttcgccgcg ctggagaaag ccagcggtgg ccgcctgggc gtcaccgtgt tgaacaccgg 180

caacggtcgt cgcatcggcg ggcatcggca ggatgagcgc ttcccgatgt gcagcacgtt 240

caagtcgatg ctggtcgccc atgtgctgag ccttgccgat gcaggccgcg tttcgctcga 300

cacccgtgtg cccatcgccg ggaaggatct gctgtcctac gctccggtgg cgcgccgcca 360

cgtgggcaag gatctgaccg tgcgcgacct gtgccggggc acgctgacca ccagcgacaa 420

cacggcggcc aacctgctgc tggaggtggt gggcgggccg tcggcgctga cggcattcct 480

gcgcgggcag ggcgacagca ttacccgcaa tgaccgcaac gagccggacg tgaatctgtt 540

cgcgaaggga gacccgcgcg ataccaccag cccggccgcg atggccacca gcctggcccg 600

cttcgcggtg ggcaatggcc tgcagcctgc atcgcgccgg cagttcgccg attggctcat 660

cgacaaccag acc 673

<210> 2872
<211> 584
<212> DNA
<213> Enterobacter cloacae

<400> 2872
cagccacact actttacctt cggtaaagcc gatgttgcgg cgaacaaacc cgtcaccccg 60

caaaccctgt ttgagctggg ctctataagt aaaaccttca ccggcgtact gggcggcgat 120

gccattgccc ggggtgaaat agcgctgggc gatccggtag caaaatactg gcctgagctc 180

acgggcaagc agtggcaggg cattcgcatg ctggatctgg caacctatac cgcaggcggt 240

ctgccgttac aggtgccgga tgaggtcacg gataccgcct ctctgctgcg cttttatcaa 300

aactggcagc cgcagtggaa gccgggcacc acgcgtcttt acgctaacgc cagcatcggt 360

ctttttggtg cgctggcggt caaaccttcc ggcatgagct atgagcaggc catgacgacg 420

cgggtcttta aacccctcaa gctggaccat acctggatta acgtcccgaa agcggaagag 480

gcgcattacg cctggggata ccgtgagggt aaagcggtcc acgtttcgcc agggatgctg 540

gacgcggaag cctatggcgt aaaaactaac gtgaaggata tggc 584

<210> 2873
<211> 556
<212> DNA
<213> Enterobacter cloacae

<400> 2873
cattagccag catgtgaaaa cgctggagca gcacctgaac tgtcagctgt tcgttcgcgt 60

gtcgcgcggg ctgatgttga ctatcgaggg tgaaaattta ctgccggtgt tgaatgattc 120

tttcgatcgt atagccggaa tgctggatcg cttcgctaac catcgtgcgc aggagaagct 180

gaaaatcggc gtggtgggta catttgccac cggggtttta ttctcgcagc tggaggattt 240

tcgccgtggc tatccgcaca tcgatcttca gctttccacc cataacaacc gcgttgatcc 300

ggctgccgaa gggcttgact atacgatccg ctacggtggc ggggcgtggc acggcaccga 360

ggctgaattc ctttgtcatg cgccgctcgc gccgctgtgt acgcccgata tcgccgccag 420

tctgcacagt ccggccgaca tcctcaggtt tacgctgctg cgctcttacc gacgcgatga 480

atggaccgcg tggatgcagg cggccggcga gcatccccct tcgccaacgc accgcgtgat 540

ggtatttgat tcgtcc 556

<210> 2874
<211> 597
<212> DNA
<213> Enterobacter cloacae

<400> 2874
gcatctcttg ctctgctctc gccacgccag tgtcagaaaa acagctggcg gaggtggtag 60

cgaatacggt taccccgctg atgaaagccc agtctgttcc aggcatggcg gtggccgtta 120

tttatcaggg aaaaccgcac tattacacgt ttggcaaggc cgatatcgcg gcgaataaac 180

ccgttacgcc tcagaccctg ttcgagctgg gttctataag taaaaccttc accggcgtgt 240

taggtgggga tgccattgct cgcggtgaaa tttcgctgga cgatccggtg accagatact 300

ggccacagct gacgggcaag cagtggcagg gtattcgtat gctggatctc gccacctaca 360

ccgctggcgg cctgccgcta caggtaccgg atgaggtcac ggataacgcc tccctgctgc 420

gcttttatca aaactggcag ccgcagtgga agcctggcac aacgcgtctt tacgccaacg 480

ccagcatcgg tctttttggt gcgctggcgg tcaaaccttc tggcatgccc tatgagcagg 540

ccatgacgac gcgggtcctt aagccgctca agctggacca tacctggatt aacgtgc 597

<210> 2875
<211> 596
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2875
ccacctcatc agcaacatga aggtgcgcgg cgtggcgccg caggacctgc ggctgatcct 60

gctcagccac gcgcacgccg accatgccgg gccggtggcg gagctgaagc gccgtacggg 120

cgccaaagta gcggccaacg ccgaatcggc ggtgctgctg gcgcgcggtg gcagcgacga 180

tctgcacttc ggcgatggca tcacctaccc gcctgccagt gcagaccgca tcgtcatgga 240

tggcgaaatg atcacggtgg gcggcatcgc gttcactgcg cacttcatgc cggggcacac 300

cccgggcagc accgcgtgga cctggaccga tacccgcgag ggcaagccgg tgcgcatcgc 360

ctacgccgac agcctgagtg caccgggcta ccagctgcag ggcaaccccc gttatccgca 420

cctgatcgag gattacaggc acagcttagc gacggtgcgg gcgctgccct gcgacgtgtt 480

gctgacaccg catccgggtg ccagcaactg ggactacgct gccggcagca aggccagcgc 540

caaggcactg acctgcaagg cctacgcgga tgcggccgaa cagaagttcg acgcac 596

<210> 2876
<211> 181
<212> DNA
<213> Enterobacter cloacae

<400> 2876
aaaacggttc accataaaaa acatcacaaa gcggctaaac cagcggcaga acagaaagcg 60

caggccgcga aaaagcacca taaaaaagcg gcaaaacctg cggtagagca gaaagcccag 120

gcggctaaaa agcatcacaa aaaagcagca aaacacgaag cggctaaacc tgctgcacag 180

c 181

<210> 2877
<211> 310
<212> DNA
<213> Enterobacter cloacae

<400> 2877
ttgccgatta tcagatcgtg accgatctga atgccgaatg cgatcgggcg atactccggg 60

ttgacgttgc gctggaaggc tcacgctacg ccgaatgcga ggtggcgttt accctgtggc 120

gtaatggcga agcctgcgcg caaaccacgc agcagcccgg atcggccatc gtggacgaac 180

gcggcagttg ggctgaacgg cttacggtgg cgatacccgt gaacgctccc gcgctgtgga 240

gcgctgaaac accggaatgc tatcggctga caatgtcgct tcgggatgcg cagggtaacg 300

tgctggagac 310

<210> 2878
<211> 260
<212> DNA
<213> Enterobacter cloacae

<400> 2878
ggtctacacc acggatcaca ccgacgttgc cgcctggggc gacgtgctga cccgttttat 60

cattgccgat aaccccactc tggcactgaa ggctgtcgat gcccctgcgc attccgacgg 120

tgctgatgca ggctcggtgg agaaagagtg gcgcgccatg accgatgtgc atcagttctt 180

tagcttactg aagcgccata acctgagccg ccagcaggcg tttcgtctgg tgagtgacga 240

tctggcctgt aaagtggata 260

<210> 2879
<211> 294

<212> DNA
<213> Enterobacter cloacae

<400> 2879
ttctcgacga acccacttca gcgctggatc tctaccacca gcagcatctg ctgcgcctgt 60

tgaaatcgct gacccgtcag ggccatcttc acgcctgcgt ggtgctgcac gatctcaatc 120

ttgccgcatt atggtcggac cggatcctgc tgttacacaa cggcaggatt gtttctcagg 180

gcataccgga gacggttttg caggccgacg cgctggcaca ctggtacggt gcgcaggtgc 240

acgttggcat gacatccggc gcacgccgca ccgcaggttt ttctcgcccc ttag 294

<210> 2880
<211> 153
<212> DNA
<213> Enterobacter cloacae

<400> 2880
cgtcggtttg tctttctgac ggccgaaggt gaggccctgc ttgagagcag taaaccgatt 60

ggaaatgagg tggatgaggc gtttttaggg cgccttaacg gcgcggaacg agagcaattt 120

tcagcgctca ttaaaaagat gatgcaggat taa 153

<210> 2881
<211> 353
<212> DNA
<213> Enterobacter cloacae

<400> 2881
gacccattac gaacaagaga tcctcgacat tcacgtcgcc cttgaaaact ggttaggtgc 60

aggcgaaggc gatcgggaca ccctgctcgc ccgtttccgt ccggattttc tgatggttcc 120

accgagtggc aaccctttag atcatcacgc gcttgcccaa atttttatat tgcacagcgg 180

gggaacccga cccgggctca ggatcgacat tgatgcgttg acaacgcttc agacatggga 240

caacggcgcg gtgctccatt accgggagac gcaaacccgg ccaggccagc ccgtcaacgt 300

gcgctggtca accgcagtgc ttaatcagga aggggataac atccacctgg cgt 353

<210> 2882
<211> 517
<212> DNA
<213> Enterobacter cloacae

<400> 2882
agtgggtgtg ctttcgtggg tcagcaatga cgcccagctg cgtcagcttt cactctgggg 60

aatgggaagt cttggtcagg cacagtggtc aacgctgctc gccgtgacct cgctgatggt 120

gcctgccgtt ctggcgatct ggcgttgtgc cagcgcatta aatttactgc aactgggtga 180

agaggaagcg cattaccttg gcgtggacgt tgcctttgta cagcgaatat tactgttatg 240

cagcgccctg ctggtcgctg cggctgtcgc cgtcagcggc gtgattggct ttgtcggact 300

cgtggtgccg cacctgatgc gcatgtggct gggcgccgat caccgggcaa ccctccccgg 360

cacggtactc gctggcgctt tactgctgct ggtggcggat acggtcgcgc gcaccctggt 420

cgctccggca gaaatgccgg tcggcctgct caccagtatc cttggtgctc cctggttctt 480

atggctcatt tttcgtcgtg gagaacagca tggctga 517

<210> 2883
<211> 627
<212> DNA
<213> Enterobacter cloacae

<400> 2883
gcggagtctt ctctggttgc gcgcgacagt accagccagt ggccgcaggc gacaaacgcg 60

ctgcctgacg tggggtatct tcgccagctg aatgcggagg ggattttgtc cgtacgcccg 120

acgctggtgc tggcaagcga ccaggcgcag ccctctctgg cgctgaaaca ggttgaacag 180

agccacgtcc gggtggttac cgttcccggc acgcctgacc tgcgcgcgat tgacgaaaaa 240

gtacgggtga tagctcaggc gacgcatcat gaggcgcaag gggaaaccct gcgcaactcg 300

ctgcgtcagg cgctggcggc actgccctca acaccgtcaa caagcgggtg ctgtttatcc 360

tcagccacgg cggaatgacc gcaatgggcg gccgggcaac agaccggcgc ggatgcggca 420

atacgcgccg ccgggttgca gaacgccatg cagggcttta cccgctatca gccgctttcc 480

aggaggggggt gatggccagc cagccggatc tggtggtgat ttcgcaggac ggtcttaacg 540

cgctgggcgg cgaagaaaat ctgtggaaac tgcccggcct ggcgcaaacg ccagcgggac 600

gaagcaagca ggtgctggct attgatg 627

<210> 2884
<211> 731
<212> DNA
<213> Enterobacter cloacae

<400> 2884
catcaggata aacggcatag atgccctgct gagcgaacgt gtacgccggt aacagcgaga 60

ccagttcccc tgcatccagt gcgtttcgca ccagccactc cggcagcagc gccactccac 120

atcccgcgag ggcaaaagcc atcagcgcct gggcgctgtc tgcatacagg cgcggcgctc 180

tcttgatctc aaaggaaacc ggctgctcat caacacctct cacctgccag cgcagcggcg 240

aggttaaacg ctcatgaatg atccagtccg cttccgccag ctgctccagc gagttaaccg 300

gatggtttgc cagccagcct ggcgttgcca cgggcaggat ggtgaaggag gtcatcaacg 360

cggcgtggta gcgcgaatct gcaagcgtgc cgagccggat agcgacatcg aagcgctcgg 420

cgataagatc ggcatgcaaa gaggacgaga catgccgcac gcgaaggtcc gggtgcagct 480

ggctaaattc agccagcaaa ggcaccacca cctgcgagcc atattcgggc gtggtggtga 540

tccgcagttc tcccgtcagc ccggcgtggt tggcgcgaac gtcatcctgc aatcgctctg 600

catcccgtaa cagcatcacg cttcgttgat gaaagagctt ccccgcctcg gtcagcgtca 660

ggcgtcgggt ggttcgcagc aacagggtga cgcccagctc ctcttcaagc tgacgaatat 720

gaaagctgac c 731

<210> 2885
<211> 353
<212> DNA
<213> Enterobacter cloacae

<400> 2885
agcagtaacc cgatgaccga tcgttccacc attcagcgcg atgcccagct tggctaccgc 60

attgcgccag ccggaaacga ctggctgaac gccgatgcga aaatttactg gtccgaagcg 120

cggatcaacg cccagaacat cgacgccagc ggcgagttcc gtaagcagac taccaaaggc 180

ggcaaagtgg aaaaccgcac ccgcctgttc agcgactctt tcgcctcgca cctgctgacc 240

tacggcgggg aatactatcg tcaggagcaa caccctggcg gcgcgaccac cggcttcccg 300

gacgcgaaaa tcgacttcag ctccggctgg ttgcaggatg agatcactct gcg 353

<210> 2886
<211> 461
<212> DNA
<213> Enterobacter cloacae

<400> 2886
gccattgtca cctttgcttt ggcctgcgcg tggcttaaaa cagaaccgtc gccgataaac 60

accaccagga cagtaaacct gtctttgctg acggatccgc tgttgcgctt atccatgctt 120

atctatgtgt gcgtacccgg catttttatc ggcgtgaacg taacgggcat gtattacctc 180

cagagcgagg ccaatatgac acccgccgca acgggcatgc ttatgctgcc gtggtctgtg 240

gcttcgtttg tggctatcac cgcgacagga cgctatttca accgtatcgg cccccggccg 300

ctggtggtca tcggttgcct tttgcaggcg acgggcattc tgcttttagt taacgtcggc 360

ccggcaatgc tgctacctgc cgttgcgttt gcgctgatgg gcgcgggggg aagcctttgc 420

agcagtacgg ctcagagcag cgcgtttttg acgatgcgac c 461

<210> 2887
<211> 401
<212> DNA
<213> Enterococcus faecium

<400> 2887
ttggcaatgc gatgttaggt aatatcatcg ttgtcagcgg ctcatttttg atactactgg 60

ctctcttgaa gcactttgct tggggaccaa tcagcgatat tttgaaaaaa cgtgaagaca 120

agatcgccaa tgatttagat tctgcagaac aatctcgcat caactcagcg aaaatggaac 180

aagaacgcga acaacaattg ttagcctctc gttctgatgc agctgatatc atcaaaaatg 240

cgaaagaaag tggagaatta agccgccaaa atattttgaa ggatgctcaa gaagaagcag 300

ctcgtctaaa aagcaaagcc caagctgata tcactgtaga acgtgattca gcgctgaact 360

ctgtaaaaga cgacgttgca gaactctctc ttcaaatcgc g 401

<210> 2888
<211> 787
<212> DNA
<213> Acinetobacter baumannii

<400> 2888
cggcatcgtc aacataacct cggacagttt ctccgatgga ggccggtatc tggcgccaga 60

cgcagccatt gcgcaggcgc gtaagctgat ggccgagggg gcagatgtga tcgacctcgg 120

tccggcatcc agcaatcccg acgccgcgcc tgtttcgtcc gacacagaaa tcgcgcgtat 180

cgcgccggtg ctggacgcgc tcaaggcaga tggcattccc gtctcgctcg acagttatca 240

acccgcgacg caagcctatg ccttgtcgcg tggtgtggcc tatctcaatg atattcgcgg 300

ttttccagac gctgcgttct atccgcaatt ggcgaaatca tctgccaaac tcgtcgttat 360

gcattcggtg caagacgggc aggcagatcg gcgcgaggca cccgctggcg acatcatgga 420

tcacattgcg gcgttctttg acgcgcgcat cgcggcgctg acgggtgccg gtatcaaacg 480

caaccgcctt gtccttgatc ccggcatggg gtttttttctg gggctgctc ccgaaacctc 540

gctctcggtg ctggcgcggt tcgatgaatt gcggctgcgc ttcgatttgc cggtgcttct 600

gtctgtttcg cgcaaatcct ttctgcgcgc gctcacaggc cgtggtccgg gggatgtcgg 660

ggccgcgaca ctcgctgcag agcttgccgc cgccgcaggt ggagctgact tcatccgcac 720

acacgagccg cgccccttgc gcgacgggct ggcggtattg gcggcgctga aagaaaccgc 780

aagaatt 787

<210> 2889
<211> 632
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2889
tgcagaacga gaaggatgcg gtggactcgg tgttctccgt gcagggcttc agcttcgccg 60

gcatgggcca gaacgcgggc atggcgttcg tcaagctgaa ggactggagc gagcgtgacg 120

ccgacaatgg cgtgatgccg atcaccggac gtgcgatggc ggccctgggc cagatcaagg 180

atgccttcat cttcgccttc ccgccgccgg ccattccgga gctggggacc gcctcgggct 240

acaccttctt cctgaaggac aacagcggcc agggccacga ggcactggtg gccgcgcgca 300

accagctgct cggcctggcc gcaggcagca agaagctggc caacgtacgc ccgaacggcc 360

aggaagacac gccgcagttc cgcatcgaca tcgacgcggc caaggcgacc tcgctgggac 420

tgtcgatcga ccagatcaac ggcacgctgg cggccgcgtg ggcagctcg tacatcgatg 480

acttcgtcga tcgtggccgc gtcaagcgcg tgttcgtgca ggccgaccag gcgttccgca 540

tggtgccgga ggacttcgat ctctggtccg tgaagaacga caagggtgag atggtgccgt 600

tcagcgcctt cgctaccaag cactgggact ac 632

<210> 2890
<211> 526
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2890
aggaacgtac gctggaatcg atcgcggcac tggaaaacca cttcctgcag aacgagaagg 60

atgcagtgga ctcggtgttc tcggtgcagg gcttcagctt cgccggcatg ggccagaacg 120

ccggcatggc gttcgtcaag ctgaaggact ggagcgagcg tgacgccaac aatggcgtga 180

tgccgatcac cggacgcgcg atggcggccc tgggccagat caaggatgcc ttcatcttcg 240

ccttcccgcc gccggccatc ccggaactgg gcaccgcctc gggctatacc ttcttcctga 300

aggacaacag cggccagggc cacgaggcac tggtggccgc gcgcaaccag ctgctcggcc 360

tcgccgccgg cagcaagaag ctggccaacg tgcgcccgaa cggccaggag gacacgccgc 420

agttccgcat cgacatcgac gcggccaagg cgacctcgct ggggctgtcg atcgaccaga 480

tcaacggcac gctggccgcc gcgtggggca gctcgtacat cgacga 526

<210> 2891
<211> 473
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2891
caagaagcag aaccttcgca tcaatgtgct tgccgccgcc gtgctgtcga tgaccgcggt 60

gggtgccgtc cacgccgctg gactgccgac ccgcgaaccg gtgcgccagg ccagtgctgc 120

ccagccgggc accgaccgca tcatcgtcaa gtatcgtgcc ggtagcgctg cagccggtga 180

ccgttcggcc aagctgtcca ccgtgcagtc ggcgctgacc cgcgccagcc tggccggcgg 240

taccgcgcgc gccagtacgc tgggcccgca ggtggtacgc cggctgggcg tgggcgcgga 300

tgtgatccgc ctgcagggcc gcctggcacc ggccgaactg cagcgcgtgc tgaaggaact 360

gaaggccgac cctgcggtgc agtacgccga ggccgacgtg aagctgcgcc gcagcgaact 420

gcgcgccggt gacgtgcagc ctgcgctggc gccgaatgat ccgtactacc agc 473

<210> 2892
<211> 403
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2892
cagcatcctg atggaagacg gcagcacctt cgagcacaag ggcacgctgg agttctctga 60

agtgagcgtc gatccagcca ccggcagctt cggcctgcgc gtgaaggtgg acaacccgga 120

cggcctgctg atgccgggca cctacgtgcg cgcggtgatc ggcggcggcg tgcgcagcga 180

tgcggtgctg gtaccgatgc agggcatcgc ccgcgatccg aagggcgaca ccaccgcgat 240

ggtggtcggc aaggacaaca aggtcgaagt gcgcccggtc aaggtcagcc gcacggtcgg 300

cgacaagtgg ctggtcgagg acggtctgaa ggccggcgac aaggtcatcg tcgaaggcct 360

gcagaagatc ggccccggca tgccggtcaa ggccaccgag aag 403

<210> 2893
<211> 476
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2893

ctcatcgcca ctttcgacac cacccagggc ccgatcaagg tcgagctgtt cgccgacaag 60

gcgccgctga ccgtggccaa cttcgtgaac ctggtcaagc acggtttcta tgacggcctg 120

atcttccacc gcgtgatcgc cgacttcatg atccagggcg gctgcccgca gggtcgtggc 180

accggcggcc cgggctacaa gttcgaagac gagaagaatg gcgtgaagca cgaggtcggc 240

tcgctgtcga tggccaacgc cggcccgaac accaacggca gccagttctt catcacccac 300

atcaagaccg actggctgga cggccgccac accgtcttcg gcaaggtcct ggaaggccag 360

gccatcgtcg attcggtcaa gcagggcgac gtgatccatt cgatcaccct ggaaggcgac 420

gtcgacgccg tgctggccgc ccaggccgag cgcgtcgcgg agtggaacaa gcacct 476

<210> 2894
<211> 380
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2894
tccagattgt cggagacatc gatgggatga ctgcgcagga tcgcgcgctc acccgccgcc 60

accgcgcgca ccagcagcca gatgaagcat gcggtcagcg cgatgtgcag cacatgctgc 120

aggttgccca gcaccggatc ctgcagcggc gtggcctgca atgcggggat caacaacagc 180

agcggccatg cggtggccag cggcaacccg agcacacgtc cgatgcgtgc gcgccggcga 240

tcacgccctt tcagtcgatg gtagatccac aggatcaacc acgcgccgat gccgcccact 300

acaacggcca atcccaacgg ccatgcgtag gcctgtgcgc tttgccagtg caccgttgcc 360

acctccactc gaacagcagg 380

<210> 2895
<211> 281
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2895
gacaccgctg ctgaagtacc gcggcatgcc gccactgatc gaacaggccg ccaccgagct 60

gcgccgcgcc ggcgccgtgg tggtaccggt ggagctgccc aaccagggcg cctgggccga 120

ggccgaacgc acgctgctgc tgtacgaatt caaggccggg ctggagcgct acttcaacac 180

ccaccgagcg ccactgcgca gcctggccga cctgatcgcc ttcaaccagg cgcacagcaa 240

acaggaactg ggcctgttcg gccaggaact gctggtggaa g 281

<210> 2896

<211> 286
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2896
ctgaagtccc caccattcct ccggtcatca acgttgacgc cgagctggat cactggcgcc 60

gccaacatgc cgaaggcgca ctgccgcaca actcgttcgg ctcgtacgtg ccgtggatca 120

agtttgcctg cgattcgctg atcacccagc cgcgcgccag cgaggccgaa cgtgacgaga 180

tgttccagac ccagtacgcc ctgcagatca tgccgcgact gagtgaagcc caggcccgcg 240

aattcgtcga ccgttgctgg cagcacgtct accagagcag tccggt 286

<210> 2897
<211> 629
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2897
cgtcaccgag aagaagagcg gccccgccct ggccagcaca cccggctcac gggtggcagc 60

ggtcatgcgc cgcaatgcgg cattggccga ggactatgcg cggcgccacg cgattccgcg 120

ctggtacgcc gacgccgacg cactcatcgc cgatcccgaa gtgaacgcgg tctacgtcgc 180

aacgccgccc tcgacgcaca tgcagtacgc gctgcaggcg atcgccgcgg gcaagccggt 240

ctacatcgaa aagccgatgg ccatggacca cgacgagtgc cagcgcatca tcgcggccag 300

cgcccgcagc ggcgtgcccg ttttcgtggc ctactaccgc cgtgccctgc cccgcttcgc 360

acaggtgaag cagctgctgg acaacggcgc gatcggaacg ccgcgcagcg tgcgcgccac 420

cctgcatcgg ccgcattcgg cgaatgccgc atcgcccgac ttctggcgga ccaatccgtc 480

gatcgccggc ggcgggctgt tcgtcgatct gggctcgcat accctggacc tgctcgacca 540

tctgctgggg ccgctgagcg acgtgcgtgg cctggccagt tcgctgaccg gcgcctacgc 600

cgccgaggac agtgtctcga tgtgcttcc 629

<210> 2898
<211> 345
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2898
ggtgatgatc cactccttca tcgagctgtc cgaagacgag cgcctgcgca agaccatgga 60

gatcatgctg cgcagcgatg cctcggccga caccagggtg ctgaccgaaa tgcagcaggc 120

cggattccgc gatgcgctgg accggatgga gcgtgccctg cgccgcgccc gcgatctggg 180

ccagctgcgc gaaggcgccg accccaagat cgccgcgcgc atgctgcatg ccaccgtgct 240

gggcgtgctg cacggggcga tggtcgaacc ggacctgatg gacctcaagc gcgacggcat 300

gctcgcactg gacatgaccc tggccgccta cgtgaaggac ggcgt 345

<210> 2899
<211> 153
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2899
accgcatggc tgacctacgg tgccgatgcg cagcggctga agatcgccga tgccacgctg 60

aagacctacg aggattcgct gcgcctggcc gaggcccgcc acgaacgtgg tggcagttcg 120

gcgctggagc tgacccagac ccgtaccctg gtc 153

<210> 2900
<211> 212
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2900
atgtcccagg taacgcaacc gcgtgtgcgt cgagtgtggg tggtccttgg tgcgtccgtt 60

ctgtcatcgc tgctgctggc cacgcctgcg ctggccggtg acgtccactc agcgggcctg 120

cagtccgcgc cgacgcacca gcgcttcatc gtgaagtacc gcgacggtag tgcgccggtg 180

gccaacacca ccgcactggc ctcttcgctg aa 212

<210> 2901
<211> 150
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2901
gtctcgacca aggtacgggt ctgggtcagc tccagcgccg aactgccgcc gcgttcgtgg 60

cgggcctcgg ccaagcgcag cgaatcctcg taggtcttca gcgtggcatc ggcgatcttc 120

agccgctgcg catcagcccc ataggtcagc 150

<210> 2902
<211> 534
<212> DNA
<213> Staphylococcus aureus

<400> 2902
gctggtaaag ctgaagaaac aacacaacca gttgcacaac cattagttaa aattccacag 60

ggcacaatta caggtgaaat tgtgaaaggt ccggaatatc caacgatgga aaataaaacg 120

ttacaaggtg aaatcgttca aggtccagat ttcccaacaa tggaacaaag cggtccatct 180

ttaagcgaca attatactca accgacgaca ccgaacccta ttttagaagg tcttgaaggt 240

agctcatcta aacttgaaat aaaaccacaa ggtactgaat caacgttgaa aggtattcaa 300

ggagaatcaa gtgatattga agttaaacct caagcaactg aaacaacaga agcttctcaa 360

tatggtccga gaccgcaatt taacaaaaca cctaagtatg tgaaatatag agatgctggt 420

acaggtattc gtgaatacaa cgatggaaca tttggatatg aagcgagacc aagattcaac 480

aagccatcag aaacaaacgc atacaacgta acgacaaatc aagatggcac agta 534

<210> 2903
<211> 505
<212> DNA
<213> Staphylococcus aureus

<400> 2903
acaagagaag cagtagcaaa cgctgacgaa tcttggaaaa ctaaaactgt aaaaaaatac 60

ggtgaatctg aaacaaaatc tcctgttgta aaagaagaga acaaagttga agaccctcaa 120

tcacctaaat ttgataacca acaagaggtt aaaactacgg ctggtaaagc tgaagaaaca 180

acacaaccag ttgcacaacc attagttaaa attccacagg gcacaattac aggtgaaatt 240

gtgaaaggtc cggaatatcc aacgatggaa aataaaacgt tacaaggtga aatcgttcaa 300

ggtccagatt tcccaacaat ggaacaaagc ggtccatctt taagcgacaa ttatactcaa 360

ccgacgacac cgaaccctat tttagaaggt cttgaaggta gctcatctaa acttgaaata 420

aaaccacaag gtactgaatc aacgttgaaa ggtattcaag gagaatcaag tgatattgaa 480

gttaaacctc aagcaactga aacaa 505

<210> 2904
<211> 523
<212> DNA
<213> Streptococcus dysgalactiae

<400> 2904
gacattgaga ttggtgatga ggatcgccga gggcttgaat tggcagcaga tattcgacaa 60

aaagacccca atgcggtcat tgtgtttgtt accacacatt ctgaatttgc tcctatttct 120

tttaaataca aagtgtctgc cttagatttt attgacaaag cagttgataa acaacaattt 180

agggatcaga ttgaagaatg tatccgctat acctatgaga tgatgtctag ccgagaatca 240

gaagacatgt ttctatttga gacccctcag acaaggttaa aattacctta caaagatatc 300

ctttattttg ctactgctac gacaccccac aaggtgtgtt tgtggactca gacggagaga 360

ctggagtttt atggtaattt atctgagata caagctgtgg ctccaaagct tttcttatgc 420

catagatctt acttggttaa tctagataag gttgtgcgta ttgataaatc caaacagctc 480

ctctatttcg ataatgggga ttcctgtatg gtctcacgct taa 523

<210> 2905
<211> 287
<212> DNA
<213> Streptococcus dysgalactiae

<400> 2905
tgttaatagt aaaatcttag atggtacttt aggcattgat ttcaagtcga tttcaaaagg 60

tgaaaagaag gtgatgattg cagcatacaa gcaaattttt tacaccgtat cagcaaacct 120

tcctaataat cctgcggatg tgtttgataa atcagtgacc tttaaagagt tgcaacgaaa 180

aggtgtcagc aatgaagccc cgccactctt tgtgagtaac gtagcttatg gtcgaactgt 240

ttttgtcaaa ctagaaacaa gttctaaaag taatgatgtt gaagcgg 287

<210> 2906
<211> 500
<212> DNA
<213> Staphylococcus hominis

<400> 2906
atcgtgcttt cagttcattt cctgtcatcc atttatgatt tttaatgatt ttaccattct 60

ctttggattt gtaatcaact acgtaaacag tcgtcttttt cacgttatct atattggctg 120

tagcaccttt cataccagac atatgacttg cttctaattt aacagtatcg cccttactaa 180

atccatcttt aggtgcatct ttaatctctt cgtttacgac ccatttatga ttgcttactt 240

tttcatttcc atttgtgggt ttataactta caacataagc atatgtttta tacgcacctt 300

ttacagtagc ttctgcacct ttcatacctg gcatatgccc tgctgtaatc gttactttat 360

ctcctacttt aaattcaccc tcattagtcg atgtcatatc ttcaggaact ttactttcat 420

cattatgctt catatggctc tcactttttt ggtcattagt gtctttatct ttttcatcat 480

tattggagca agctgataat 500

<210> 2907
<211> 610

<212> DNA
<213> Acinetobacter baumannii

<400> 2907
gcaggtgatt tatttgcttc aaaccgatta ggtgaatctt ttgcattgat tgatacaaac 60

caagtgcctg atgttctggt cagatacgaa aacagtttaa ttggccgcag taataaaaaa 120

ggccatattt ttgtgccatc ggtgacgcct tactattcgg gtaaatacag cgtcgaccca 180

atcgatttac cttcaaactt cactatcacg caagttgaac aacgtattgc tgctaaacgt 240

ggctcgggtg ttgtgattaa gttcccagtt catcagtcta tttccgcaaa tgtctatttg 300

actcaggcag atggcaaacc tgtgccggta ggggctgtag tacatagagc tgatcaagag 360

tcttcttatg tgggaatgga tggcattgtc tatttagaaa atttaaaacc gaataacacc 420

gtaacggttc agcgttcgga ccaaagtatt tgtaaagcag atttttctgt agatgtagaa 480

caagccaagc agcagattgt ggtggttaaa cctgttactt gtcacgaggt atctttgcca 540

tgaatataaa aacaaaaaaa ttactcagac atttatgcat gttctctgga ctgatgttga 600

cgggaaatat 610

<210> 2908
<211> 516
<212> DNA
<213> Acinetobacter baumannii

<400> 2908
acggtatcga aagctgaaat gcagcactcc attctttttc gatgaaatca cggttggcac 60

ttaatgaaac agtcacacca ttcatataag tcggtaaaac aggcgcccaa gacaaattta 120

agaagcgatt tttaaagtca tttgccttgg tattgatata accgacgcca aaagttccag 180

agtttttggt cgcaaaataa gtattggccg ttaagctttt attgctattt actgaaatta 240

aattgctata ttgcagccgt gaaaggtcgg tatattcatc atcacgttgg ttatggttaa 300

tgctaaaacc aaaccgatta cggttatagc tgtatccaac tgtatattgg ttaccttcca 360

agtctttcgt tcgatcttca gacatagatt tgtcggcttt actttgggta aaagaggcac 420

tcagcacacc taaatttgca agcttgagta cagacccagc acccaataac tgtaaatctg 480

aagaaagctc ggtgcgtcct tctacagtca gccagt 516

<210> 2909
<211> 18
<212> DNA
<213> synthetic construct

<400> 2909
ccacactggg actgagac 18

<210> 2910
<211> 19
<212> DNA
<213> synthetic construct

<400> 2910
gctcgggacc tacgtatta 19

<210> 2911
<211> 25
<212> DNA
<213> synthetic construct

<400> 2911
ggtaccaagt atgatatgga tatgg 25

<210> 2912
<211> 20
<212> DNA
<213> synthetic construct

<400> 2912
ctgaattttg gagcaaaacc 20

<210> 2913
<211> 20
<212> DNA
<213> synthetic construct

<400> 2913
cttatcgaaa cgcttacgtc 20

<210> 2914
<211> 20
<212> DNA
<213> synthetic construct

<400> 2914
ataaagtcat taggccggta 20

<210> 2915
<211> 21
<212> DNA
<213> synthetic construct

<400> 2915

cacagcaaca aactactcaa a 21

<210> 2916
<211> 20
<212> DNA
<213> synthetic construct

<400> 2916
gctgcttggt ctgaaagtaa 20

<210> 2917
<211> 20
<212> DNA
<213> synthetic construct

<400> 2917
tgagtattcc caaaattgct 20

<210> 2918
<211> 19
<212> DNA
<213> synthetic construct

<400> 2918
gcatgagttg ttcaagtgg 19

<210> 2919
<211> 20
<212> DNA
<213> synthetic construct

<400> 2919
gcacattggg ataatgagac 20

<210> 2920
<211> 20
<212> DNA
<213> synthetic construct

<400> 2920
tgaacatagt ttgcaccaag 20

<210> 2921
<211> 20
<212> DNA
<213> synthetic construct

<400> 2921
tgtatctcga tttggttgtg 20

<210> 2922
<211> 19
<212> DNA
<213> synthetic construct

<400> 2922
caaactgcca agatgtgtc 19

<210> 2923
<211> 21
<212> DNA
<213> synthetic construct

<400> 2923
tcacttgtta cacctgtgat g 21

<210> 2924
<211> 20
<212> DNA
<213> synthetic construct

<400> 2924
ttgttgatta ttgcgaactg 20

<210> 2925
<211> 20
<212> DNA
<213> synthetic construct

<400> 2925
attgatcgaa atcaccaaaa 20

<210> 2926
<211> 20
<212> DNA
<213> synthetic construct

<400> 2926
ccatgagtct ttacccaaaa 20

<210> 2927
<211> 20
<212> DNA
<213> synthetic construct

<400> 2927
gcactggttg aaactgaact 20

<210> 2928

<211> 22
<212> DNA
<213> synthetic construct

<400> 2928
atactttggc ccatacttct ac 22

<210> 2929
<211> 27
<212> DNA
<213> synthetic construct

<400> 2929
gctatctgtt agtcaattta tatatgc 27

<210> 2930
<211> 18
<212> DNA
<213> synthetic construct

<400> 2930
ataaattccg gccgtatg 18

<210> 2931
<211> 24
<212> DNA
<213> synthetic construct

<400> 2931
atatgaaaaa cattcagaaa tcac 24

<210> 2932
<211> 23
<212> DNA
<213> synthetic construct

<400> 2932
agagtatctt tataatcgcc ttg 23

<210> 2933
<211> 20
<212> DNA
<213> synthetic construct

<400> 2933
tttaaatgga gggaagatga 20

<210> 2934
<211> 18
<212> DNA

<213> synthetic construct

<400> 2934
catcatgggt tgcttgac 18

<210> 2935
<211> 19
<212> DNA
<213> synthetic construct

<400> 2935
gcttccttac gttcctctg 19

<210> 2936
<211> 20
<212> DNA
<213> synthetic construct

<400> 2936
ttggtttgca gttgatattg 20

<210> 2937
<211> 19
<212> DNA
<213> synthetic construct

<400> 2937
taggtaatgc tggtgttgg 19

<210> 2938
<211> 18
<212> DNA
<213> synthetic construct

<400> 2938
gacggttcat agcacgac 18

<210> 2939
<211> 20
<212> DNA
<213> synthetic construct

<400> 2939
tcgtgtgtta ttgcttgatg 20

<210> 2940
<211> 21
<212> DNA
<213> synthetic construct

<400> 2940
ctgcaaatag gtgaagttga g 21

<210> 2941
<211> 20
<212> DNA
<213> synthetic construct

<400> 2941
atgcctattt ccaatcaaga 20

<210> 2942
<211> 18
<212> DNA
<213> synthetic construct

<400> 2942
gcaatgcttc ctgacatt 18

<210> 2943
<211> 20
<212> DNA
<213> synthetic construct

<400> 2943
agatggatgt tgatgctctt 20

<210> 2944
<211> 24
<212> DNA
<213> synthetic construct

<400> 2944
gagttcaagt actcagcttc ataa 24

<210> 2945
<211> 19
<212> DNA
<213> synthetic construct

<400> 2945
gatgaatacc gcccattac 19

<210> 2946
<211> 21
<212> DNA
<213> synthetic construct

<400> 2946
aaactcacga atgacactac c 21

```
<210>  2947
<211>  22
<212>  DNA
<213>  synthetic construct

<400>  2947
tttaaagttc ctacggctaa ac                                                22


<210>  2948
<211>  18
<212>  DNA
<213>  synthetic construct

<400>  2948
gcgcttgcaa actaactg                                                     18


<210>  2949
<211>  18
<212>  DNA
<213>  synthetic construct

<400>  2949
ttaaacgtct tgccgatg                                                     18


<210>  2950
<211>  20
<212>  DNA
<213>  synthetic construct

<400>  2950
taaacgatag tcacgctctg                                                   20


<210>  2951
<211>  19
<212>  DNA
<213>  synthetic construct

<400>  2951
cgacgcttta tctcttcgt                                                    19


<210>  2952
<211>  20
<212>  DNA
<213>  synthetic construct

<400>  2952
gtacggctac cagtgattgt                                                   20
```

<210> 2953
<211> 18
<212> DNA
<213> synthetic construct

<400> 2953
ccgacacttg ctgacgta 18

<210> 2954
<211> 18
<212> DNA
<213> synthetic construct

<400> 2954
cgctttctcg tagcatcg 18

<210> 2955
<211> 21
<212> DNA
<213> synthetic construct

<400> 2955
gtgaaggcat gagtgttatt c 21

<210> 2956
<211> 19
<212> DNA
<213> synthetic construct

<400> 2956
gctatctacg gttcgctct 19

<210> 2957
<211> 22
<212> DNA
<213> synthetic construct

<400> 2957
tcagtgtatt aagcattcaa cc 22

<210> 2958
<211> 19
<212> DNA
<213> synthetic construct

<400> 2958
ataattcgcc gctttgtag 19

<210> 2959
<211> 18

<212> DNA
<213> synthetic construct

<400> 2959
atcgtgacca acagcaac 18

<210> 2960
<211> 18
<212> DNA
<213> synthetic construct

<400> 2960
atggaagggt taggcatc 18

<210> 2961
<211> 22
<212> DNA
<213> synthetic construct

<400> 2961
tcagtgtatt aagcattcaa cc 22

<210> 2962
<211> 19
<212> DNA
<213> synthetic construct

<400> 2962
ataattcgcc gctttgtag 19

<210> 2963
<211> 22
<212> DNA
<213> synthetic construct

<400> 2963
tcagtgtatt aagcattcaa cc 22

<210> 2964
<211> 19
<212> DNA
<213> synthetic construct

<400> 2964
ataattcgcc gctttgtag 19

<210> 2965
<211> 20
<212> DNA
<213> synthetic construct

<400> 2965
tgccaattaa cttcttagcc 20

<210> 2966
<211> 20
<212> DNA
<213> synthetic construct

<400> 2966
acaacagcaa gacctaaacc 20

<210> 2967
<211> 18
<212> DNA
<213> synthetic construct

<400> 2967
attcctgcag ttcagtgg 18

<210> 2968
<211> 18
<212> DNA
<213> synthetic construct

<400> 2968
ggtctggttg tcgatgag 18

<210> 2969
<211> 21
<212> DNA
<213> synthetic construct

<400> 2969
cagccacact actttacctt c 21

<210> 2970
<211> 20
<212> DNA
<213> synthetic construct

<400> 2970
gccatatcct tcacgttagt 20

<210> 2971
<211> 19
<212> DNA
<213> synthetic construct

<400> 2971

cattagccag catgtgaaa 19

<210> 2972
<211> 20
<212> DNA
<213> synthetic construct

<400> 2972
ggacgaatca aataccatca 20

<210> 2973
<211> 18
<212> DNA
<213> synthetic construct

<400> 2973
gcatctcttg ctctgctc 18

<210> 2974
<211> 19
<212> DNA
<213> synthetic construct

<400> 2974
gcacgttaat ccaggtatg 19

<210> 2975
<211> 18
<212> DNA
<213> synthetic construct

<400> 2975
ccacctcatc agcaacat 18

<210> 2976
<211> 18
<212> DNA
<213> synthetic construct

<400> 2976
gtgcgtcgaa cttctgtt 18

<210> 2977
<211> 20
<212> DNA
<213> synthetic construct

<400> 2977
aaaacggttc accataaaaa 20

<210> 2978
<211> 18
<212> DNA
<213> synthetic construct

<400> 2978
gctgtgcagc aggtttag 18

<210> 2979
<211> 19
<212> DNA
<213> synthetic construct

<400> 2979
ttgccgatta tcagatcgt 19

<210> 2980
<211> 18
<212> DNA
<213> synthetic construct

<400> 2980
gtctccagca cgttaccc 18

<210> 2981
<211> 18
<212> DNA
<213> synthetic construct

<400> 2981
ggtctacacc acggatca 18

<210> 2982
<211> 20
<212> DNA
<213> synthetic construct

<400> 2982
tatccacttt acaggccaga 20

<210> 2983
<211> 18
<212> DNA
<213> synthetic construct

<400> 2983
ttctcgacga acccactt 18

<210> 2984

<211> 18
<212> DNA
<213> synthetic construct

<400> 2984
ctaaggggcg agaaaaac 18

<210> 2985
<211> 18
<212> DNA
<213> synthetic construct

<400> 2985
cgtcggtttg tctttctg 18

<210> 2986
<211> 21
<212> DNA
<213> synthetic construct

<400> 2986
ttaatcctgc atcatctttt t 21

<210> 2987
<211> 20
<212> DNA
<213> synthetic construct

<400> 2987
gacccattac gaacaagaga 20

<210> 2988
<211> 18
<212> DNA
<213> synthetic construct

<400> 2988
acgccaggtg gatgttat 18

<210> 2989
<211> 18
<212> DNA
<213> synthetic construct

<400> 2989
agtgggtgtg ctttcgtg 18

<210> 2990
<211> 18
<212> DNA

<213> synthetic construct

<400> 2990
tcagccatgc tgttctcc 18

<210> 2991
<211> 18
<212> DNA
<213> synthetic construct

<400> 2991
gcggagtctt ctctggtt 18

<210> 2992
<211> 18
<212> DNA
<213> synthetic construct

<400> 2992
catcaatagc cagcacct 18

<210> 2993
<211> 20
<212> DNA
<213> synthetic construct

<400> 2993
catcaggata aacggcatag 20

<210> 2994
<211> 20
<212> DNA
<213> synthetic construct

<400> 2994
ggtcagcttt catattcgtc 20

<210> 2995
<211> 18
<212> DNA
<213> synthetic construct

<400> 2995
agcagtaacc cgatgacc 18

<210> 2996
<211> 18
<212> DNA
<213> synthetic construct

<400> 2996
cgcagagtga tctcatcc 18

<210> 2997
<211> 18
<212> DNA
<213> synthetic construct

<400> 2997
gccattgtca cctttgct 18

<210> 2998
<211> 18
<212> DNA
<213> synthetic construct

<400> 2998
ggtcgcatcg tcaaaaac 18

<210> 2999
<211> 18
<212> DNA
<213> synthetic construct

<400> 2999
ttggcaatgc gatgttag 18

<210> 3000
<211> 18
<212> DNA
<213> synthetic construct

<400> 3000
cgcgatttga agagagag 18

<210> 3001
<211> 18
<212> DNA
<213> synthetic construct

<400> 3001
cggcatcgtc aacataac 18

<210> 3002
<211> 19
<212> DNA
<213> synthetic construct

<400> 3002
aattcttgcg gtttctttc 19

<210> 3003
<211> 18
<212> DNA
<213> synthetic construct

<400> 3003
tgcagaacga gaaggatg 18

<210> 3004
<211> 20
<212> DNA
<213> synthetic construct

<400> 3004
gtagtcccag tgcttggtag 20

<210> 3005
<211> 18
<212> DNA
<213> synthetic construct

<400> 3005
aggaacgtac gctggaat 18

<210> 3006
<211> 18
<212> DNA
<213> synthetic construct

<400> 3006
tcgtcgatgt acgagctg 18

<210> 3007
<211> 18
<212> DNA
<213> synthetic construct

<400> 3007
caagaagcag aaccttcg 18

<210> 3008
<211> 20
<212> DNA
<213> synthetic construct

<400> 3008
gctggtagta cggatcattc 20

<210> 3009
<211> 19
<212> DNA
<213> synthetic construct

<400> 3009
cagcatcctg atggaagac 19

<210> 3010
<211> 18
<212> DNA
<213> synthetic construct

<400> 3010
cttctcggtg gccttgac 18

<210> 3011
<211> 18
<212> DNA
<213> synthetic construct

<400> 3011
ctcatcgcca ctttcgac 18

<210> 3012
<211> 18
<212> DNA
<213> synthetic construct

<400> 3012
aggtgcttgt tccactcc 18

<210> 3013
<211> 19
<212> DNA
<213> synthetic construct

<400> 3013
tccagattgt cggagacat 19

<210> 3014
<211> 18
<212> DNA
<213> synthetic construct

<400> 3014
cctgctgttc gagtggag 18

<210> 3015
<211> 18

<212> DNA
<213> synthetic construct

<400> 3015
gacaccgctg ctgaagta 18

<210> 3016
<211> 18
<212> DNA
<213> synthetic construct

<400> 3016
cttccaccag cagttcct 18

<210> 3017
<211> 18
<212> DNA
<213> synthetic construct

<400> 3017
ctgaagtccc caccattc 18

<210> 3018
<211> 18
<212> DNA
<213> synthetic construct

<400> 3018
accggactgc tctggtag 18

<210> 3019
<211> 18
<212> DNA
<213> synthetic construct

<400> 3019
cgtcaccgag aagaagag 18

<210> 3020
<211> 18
<212> DNA
<213> synthetic construct

<400> 3020
ggaagcacat cgagacac 18

<210> 3021
<211> 19
<212> DNA
<213> synthetic construct

<400> 3021
ggtgatgatc cactccttc 19

<210> 3022
<211> 18
<212> DNA
<213> synthetic construct

<400> 3022
acgccgtcct tcacgtag 18

<210> 3023
<211> 18
<212> DNA
<213> synthetic construct

<400> 3023
accgcatggc tgacctac 18

<210> 3024
<211> 18
<212> DNA
<213> synthetic construct

<400> 3024
gaccagggta cgggtctg 18

<210> 3025
<211> 19
<212> DNA
<213> synthetic construct

<400> 3025
atgtcccagg taacgcaac 19

<210> 3026
<211> 18
<212> DNA
<213> synthetic construct

<400> 3026
ttcagcgaag aggccagt 18

<210> 3027
<211> 18
<212> DNA
<213> synthetic construct

<400> 3027

gtctcgacca aggtacgg 18

<210> 3028
<211> 18
<212> DNA
<213> synthetic construct

<400> 3028
gctgacctat ggggctga 18

<210> 3029
<211> 20
<212> DNA
<213> synthetic construct

<400> 3029
gctggtaaag ctgaagaaac 20

<210> 3030
<211> 20
<212> DNA
<213> synthetic construct

<400> 3030
tactgtgcca tcttgatttg 20

<210> 3031
<211> 21
<212> DNA
<213> synthetic construct

<400> 3031
acaagagaag cagtagcaaa c 21

<210> 3032
<211> 19
<212> DNA
<213> synthetic construct

<400> 3032
ttgtttcagt tgcttgagg 19

<210> 3033
<211> 21
<212> DNA
<213> synthetic construct

<400> 3033
gacattgaga ttggtgatga g 21

<210> 3034
<211> 20
<212> DNA
<213> synthetic construct

<400> 3034
ttaagcgtga gaccatacag 20

<210> 3035
<211> 24
<212> DNA
<213> synthetic construct

<400> 3035
tgttaatagt aaaatcttag atgg 24

<210> 3036
<211> 18
<212> DNA
<213> synthetic construct

<400> 3036
ccgcttcaac atcattac 18

<210> 3037
<211> 20
<212> DNA
<213> synthetic construct

<400> 3037
atcgtgcttt cagttcattt 20

<210> 3038
<211> 21
<212> DNA
<213> synthetic construct

<400> 3038
attatcagct tgctccaata a 21

<210> 3039
<211> 20
<212> DNA
<213> synthetic construct

<400> 3039
gcaggtgatt tatttgcttc 20

<210> 3040

<211> 20
<212> DNA
<213> synthetic construct

<400> 3040
atatttcccg tcaacatcag 20

<210> 3041
<211> 19
<212> DNA
<213> synthetic construct

<400> 3041
acggtatcga aagctgaaa 19

<210> 3042
<211> 20
<212> DNA
<213> synthetic construct

<400> 3042
actggctgac tgtagaagga 20

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

PCT

(43) International Publication Date
12 April 2007 (12.04.2007)

(10) International Publication Number
WO 2007/039319 A3

(51) International Patent Classification:
C12Q 1/68 (2006.01)

(21) International Application Number:
PCT/EP2006/010132

(22) International Filing Date:
29 September 2006 (29.09.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
05109025.6 29 September 2005 (29.09.2005) EP

(71) Applicant *(for all designated States except US)*: UNIVERSITÄT ZU KÖLN [—/DE]; Albertus-Magnus-Platz, 50923 Köln (DE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **KRUT, Oleg** [RU/DE]; Schiefersburger Weg 93, 50937 Köln (DE). **PALKA-SANTINI, Marie** [FR/DE]; Mohnweg 2, 50858 Köln (DE). **CLEVEN, Berit** [DE/DE]; Bachstr. 21, 53919 Weilerswist (DE). **KRÖNKE, Martin** [DE/DE]; Eugen-Langen-Str. 2, 50968 Köln (DE).

(74) Agent: **HELBING, Jörg**; P.O. Box 10 22 41, 50462 Köln (DE).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
20 September 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2007/039319 A3

(54) **Title:** ANALYTICAL DEVICE FOR RAPID IDENTIFICATION OF PATHOGENS

(57) **Abstract:** DNA microarray for rapid identification of candida albicans in blood cultures.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, MEDLINE, PAJ, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NAKAMURA M ET AL: "DEVELOPMENT OF THE DNA MICRO ARRAY FOR IDENTIFICATION OF INFECTIOUS DISEASE CAUSACTIVE BACTERIA IN HUMAN" 18 May 2003 (2003-05-18), ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, THE SOCIETY, WASHINGTON, DC, US, PAGE(S) ABSTRNOC219 , XP008047725 ISSN: 1060-2011 abstract ----- -/--	1-8, 10-25

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
5 July 2007	26/07/2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Helliot, Bertrand

17

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WANG R-F ET AL: "DNA microarray analysis of predominant human intestinal bacteria in fecal samples" August 2004 (2004-08), MOLECULAR AND CELLULAR PROBES, ACADEMIC PRESS, LONDON, GB, PAGE(S) 223-234 , XP004522575 ISSN: 0890-8508 abstract; tables 1,2	1-8, 10-25
A	LEHNER A ET AL: "Oligonucleotide microarray for identification of Enterococcus species" 1 May 2005 (2005-05-01), FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, PAGE(S) 133-142 , XP004876200 ISSN: 0378-1097 abstract	1-8, 10-25
X	EP 1 310 569 A (PRESIDENT OF GIFU UNIVERSITY) 14 May 2003 (2003-05-14) claim 14	1-6, 10-13, 15,19-25
X	WO 92/07096 A (MICROPROBE CORPORATION) 30 April 1992 (1992-04-30) page 12, paragraph 2 page 27, paragraph 2 example 6	1-6,10, 12,13
X	US 6 747 137 B1 (WEINSTOCK KEITH G [US] ET AL) 8 June 2004 (2004-06-08) column 2, lines 41-47 column 16, lines 55-60 column 19, lines 43-61 column 42, lines 5-43 table 2 claim 7	1-6,10, 12,13, 19-25
X	EP 1 344 833 A (CHIP BIOTECHNOLOGY INC DR [TW]) 17 September 2003 (2003-09-17)	1-6, 10-13, 15,16, 18-25
Y	page 2, paragraphs 8,10 page 3, paragraphs 13,18,19 examples 1,2 claim 8	7,14,17
Y	US 6 008 341 A1 (FOSTER TIMOTHY JAMES [IE] ET AL) 28 December 1999 (1999-12-28) figure 2	7,14,17

-/--

17

International application No
PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094868 A (CHIRON SPA [IT]; MASIGNANI VEGA [IT]; MORA MARIROSA [IT]; SCARSELLI MA) 28 November 2002 (2002-11-28) page 2, lines 12,13 page 2, lines 20-25 sequences 1992,3983 -----	1-8, 10-15

17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2006/010132

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

1-4 (totally), 5-8, 10-18 (partially), 19-25

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☒ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-7 and 10-25 (partially)

An analytical device for direct identification and characterisation of microoragnisms in a sample or clinical specimen, wherein the device comprises species specific gene probes of at least 100 nucleotides, and in particular a device for Staphylococcus species identification, in particular for S. aureus identification, wherein, in this case, the microarray comprises the gene probe listed as SEQ ID N° 3 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 2-176: claims 1-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus aureus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° SEQ ID N° 1-2, 4-141, 790, 798, 801, 802, 808, 812, 814, 818, 825, 827, 837, 840, 843, 844, 846, 848-852, 854, 855, 859, 862, 875, 885, 896, 897, 904, 907, 908, 935, 942, 2902, 2903, and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 177-220: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of E. coli in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 142-173, 815, 833, 834, 836, 839, 857, 860, 886-887, 895, 901, 906, and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of E. coli in a sample or in a clinical specimen.

Inventions 221-258: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Staphylococcus epidermis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 174-208,786, 806, 826 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus epidermis in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus epidermis in a sample or clinical specimen.

Inventions 259-269: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus haemoliyticus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 209-215, 796, 803, 820, 938 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus haemoliyticus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus haemoliyticus in a sample or clinical specimen.

Inventions 270-276: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus lugdunensis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 216-221, 888 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus lugdunensis in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus lugdunensis in a sample or clinical specimen.

Inventions 277-284: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Staphylococcus warneri in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 224-230, 831 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus warneri in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus warneri in a sample or clinical specimen.

Inventions 285-286: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus saprophyticus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 222-223 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus saprophyticus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus saprophyticus in a sample or clinical specimen.

Inventions 287-375: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus pneumoniae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N°523-605, 793, 805, 807, 813, 858, 929 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus pneumoniae in a sample or in a clinical specimen.
A kit for the detection of Streptococcus pneumoniae in a sample or clinical specimen.

Inventions 376-420: claims 1-4, 6, 11-12, 14-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Streptococcus pyogenes in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 645-686, 800, 856, 928 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus pyogenes in a sample or in a clinical specimen.
A kit for the detection of Streptococcus pyogenes in a sample or clinical specimen.

Inventions 421-477: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Klebsiella pneumoniae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 399-448, 792, 794, 829, 899, 902, 903, 934 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Klebsiella pneumoniae in a sample or in a clinical specimen.
A kit for the detection of Klebsiella pneumoniae in a sample or clinical specimen.

Inventions 478-504: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Klebsiella oxytoca in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 449-469, 789, 799, 816, 822, 898, 943 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Klebsiella oxytoca in a sample or in a clinical specimen.
A kit for the detection of Klebsiella oxytoca in a sample or clinical specimen.

Inventions 505-571: claims 1-4, 6, 11-12, 13-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Pseudomonas aeruginosa in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 470-522, 785, 787, 791, 797, 804, 821, 832, 838, 841, 842, 884, 889, 905, 926 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Pseudomonas aeruginosa in a sample or in a clinical specimen.
A kit for the detection of Pseudomonas aeruginosa in a sample or clinical specimen.

Inventions 572-611: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus agalactiae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 606-644, 930 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus agalactiae in a sample or in a clinical specimen.
A kit for the detection of Streptococcus agalactiae in a sample or clinical specimen.

Invention 612: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus mutans in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 894 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus mutans in a sample or in a clinical specimen.
A kit for the detection of Streptococcus mutans in a sample or clinical specimen.

Inventions 613-633: claims 1-4, 6, 8, 10-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Enterococcus faecalis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 308-398, 809, 811, 835, 864, 865, 880, 891, 909, 933, 936 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterococcus faecalis in a sample or in a clinical specimen.
A kit for the detection of Enterococcus faecalis in a sample or clinical specimen.

Inventions 634-659: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and characterisation of Enterococcus faecuim in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 810, 817, 824, 847, 853, 861, 866-874, 876-879, 882, 900, 927, 931, 932, 939, 2887 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterococcus faecuim in a sample or in a clinical specimen.
A kit for the detection of Enterococcus faecuim in a sample or clinical specimen.

Inventions 660-736: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and characterisation of Proteus mirabilis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 706-775, 788, 830, 863, 883, 890, 892, 940 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Proteus mirabilis in a sample or in a clinical specimen.
A kit for the detection of Proteus mirabilis in a sample or clinical specimen.

Inventions 737-749: claims 1-4, 6, 11-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Proteus vulgaris in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 776-784, 819, 823, 893, 941 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Proteus vulgaris in a sample or in a clinical specimen.
A kit for the detection of Proteus vulgaris in a sample or clinical specimen.

Inventions 750-835: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Candida albicans in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 231-307, 910-918 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Candida albicans in a sample or in a clinical specimen.
A kit for the detection of Candida albicans in a sample or clinical specimen.

Inventions 836-864: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Acinetobacter baumanii in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2843-2863, 2865, 2866, 2868-2870, 2888, 2907, 2908 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Acinetobacter baumanii in a sample or in a clinical specimen.
A kit for the detection of Acinetobacter baumanii in a sample or clinical specimen.

Inventions 865-883: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus viridans in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 687-705 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus viridans in a sample or in a clinical specimen.
A kit for the detection of Streptococcus viridans in a sample or clinical specimen.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Invention 884: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Salmonella typhimurium in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 795 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Salmonella typhimurium in a sample or in a clinical specimen.
A kit for the detection of Salmonella typhimurium in a sample or clinical specimen.

Invention 885: claims 1-4, 8, 10-13, 15-25 (partially)

An analytical device for direct identification and characterisation of Enterococcus flavescens in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 881 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterococcus flavescens in a sample or in a clinical specimen.
A kit for the detection of Enterococcus flavescens in a sample or clinical specimen.

Inventions 886-887: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Staphilococcus hominis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 937, 2906 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphilococcus hominis in a sample or in a clinical specimen.
A kit for the detection of Staphilococcus hominis in a sample.

Inventions 888-889: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Stenotrophomonas maltophilia in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2871, 2875, 2889-2901 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Stenotrophomonas maltophilia in a sample or in a clinical specimen.
A kit for the detection of Stenotrophomonas maltophilia in a sample or clinical specimen.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2006/010132

Patent document cited in search report		Publication date	Patent family member(s)			Publication date
EP 1310569	A	14-05-2003	CA	2411537	A1	09-05-2003
			JP	2003144153	A	20-05-2003
			US	2003091991	A1	15-05-2003
WO 9207096	A	30-04-1992	AT	161893	T	15-01-1998
			DE	69128639	D1	12-02-1998
			DE	69128639	T2	23-04-1998
			DK	554355	T3	11-05-1998
			EP	0554355	A1	11-08-1993
			ES	2112868	T3	16-04-1998
			GR	3026488	T3	31-07-1998
			HK	1005488	A1	08-01-1999
			JP	6502305	T	17-03-1994
US 6747137	B1	08-06-2004	US	2007027309	A1	01-02-2007
EP 1344833	A	17-09-2003	US	2003175716	A1	18-09-2003
US 6008341	A1		NONE			
WO 02094868	A	28-11-2002	CA	2440368	A1	28-11-2002
			EP	1373310	A2	02-01-2004
			JP	2005502326	T	27-01-2005
			US	2006115490	A1	01-06-2006

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

REVISED VERSION

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 April 2007 (12.04.2007)

PCT

(10) International Publication Number
WO 2007/039319 A3

(51) International Patent Classification:
C12Q 1/68 (2006.01)

(21) International Application Number:
PCT/EP2006/010132

(22) International Filing Date:
29 September 2006 (29.09.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
05109025.6 29 September 2005 (29.09.2005) EP

(71) Applicant (*for all designated States except US*): **UNIVERSITÄT ZU KÖLN** [—/DE]; Albertus-Magnus-Platz, 50923 Köln (DE).

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): **KRUT, Oleg** [RU/DE]; Schiefersburger Weg 93, 50937 Köln (DE). **PALKA-SANTINI, Marie** [FR/DE]; Mohnweg 2, 50858 Köln (DE). **CLEVEN, Berit** [DE/DE]; Bachstr. 21, 53919 Weilerswist (DE). **KRÖNKE, Martin** [DE/DE]; Eugen-Langen-Str. 2, 50968 Köln (DE).

(74) Agent: **HELBING, Jörg**; P.O. Box 10 22 41, 50462 Köln (DE).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
20 September 2007

Date of publication of the revised international search report: 20 March 2008

(15) Information about Correction:
see Notice of 20 March 2008

WO 2007/039319 A3

(54) Title: DNA MICROARRAY FOR RAPID IDENTIFICATION OF CANDIDA ALBICANS IN BLOOD CULTURES

(57) Abstract: DNA microarray for rapid identification of candida albicans in blood cultures.

REVISED VERSION

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, MEDLINE, PAJ, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NAKAMURA M ET AL: "DEVELOPMENT OF THE DNA MICRO ARRAY FOR IDENTIFICATION OF INFECTIOUS DISEASE CAUSACTIVE BACTERIA IN HUMAN" 18 May 2003 (2003-05-18), ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, THE SOCIETY, WASHINGTON, DC, US, PAGE(S) ABSTRNOC219 , XP008047725 ISSN: 1060-2011 abstract ----- -/--	1-8, 10-25

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
5 July 2007	21. 12. 2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Helliot, Bertrand

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WANG R-F ET AL: "DNA microarray analysis of predominant human intestinal bacteria in fecal samples" August 2004 (2004-08), MOLECULAR AND CELLULAR PROBES, ACADEMIC PRESS, LONDON, GB, PAGE(S) 223-234 , XP004522575 ISSN: 0890-8508 abstract; tables 1,2	1-8, 10-25
A	LEHNER A ET AL: "Oligonucleotide microarray for identification of Enterococcus species" 1 May 2005 (2005-05-01), FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, PAGE(S) 133-142 , XP004876200 ISSN: 0378-1097 abstract	1-8, 10-25
X	EP 1 310 569 A (PRESIDENT OF GIFU UNIVERSITY) 14 May 2003 (2003-05-14) claim 14	1-6, 10-13, 15,19-25
X	WO 92/07096 A (MICROPROBE CORPORATION) 30 April 1992 (1992-04-30) page 12, paragraph 2 page 27, paragraph 2 example 6	1-6,10, 12,13
X	US 6 747 137 B1 (WEINSTOCK KEITH G [US] ET AL) 8 June 2004 (2004-06-08) column 2, lines 41-47 column 16, lines 55-60 column 19, lines 43-61 column 42, lines 5-43 table 2 claim 7	1-6,10, 12,13, 19-25
X	EP 1 344 833 A (CHIP BIOTECHNOLOGY INC DR [TW]) 17 September 2003 (2003-09-17)	1-6, 10-13, 15,16, 18-25
Y	page 2, paragraphs 8,10 page 3, paragraphs 13,18,19 examples 1,2 claim 8	7,14,17
Y	US 6 008 341 A1 (FOSTER TIMOTHY JAMES [IE] ET AL) 28 December 1999 (1999-12-28) figure 2	7,14,17

-/--

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094868 A (CHIRON SPA [IT]; MASIGNANI VEGA [IT]; MORA MARIROSA [IT]; SCARSELLI MA) 28 November 2002 (2002-11-28) page 2, lines 12,13 page 2, lines 20-25 sequences 1992,3983 -----	1-8, 10-15

International application No.
PCT/EP2006/010132

INTERNATIONAL SEARCH REPORT

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

   1-4 (totally), 5-8, 10-18 (partially), 19-25

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☒ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-7 and 10-25 (partially)

An analytical device for direct identification and characterisation of microoragnisms in a sample or clinical specimen, wherein the device comprises species specific gene probes of at least 100 nucleotides, and in particular a device for Staphylococcus species identification, in particular for S. aureus identification, wherein, in this case, the microarray comprises the gene probe listed as SEQ ID N° 3 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 2-176: claims 1-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus aureus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° SEQ ID N° 1-2, 4-141, 790, 798, 801, 802, 808, 812, 814, 818, 825, 827, 837, 840, 843, 844, 846, 848-852, 854, 855, 859, 862, 875, 885, 896, 897, 904, 907, 908, 935, 942, 2902, 2903, and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 177-220: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of E. coli in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 142-173, 815, 833, 834, 836, 839, 857, 860, 886-887, 895, 901, 906, and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of E. coli in a sample or in a clinical specimen.

Inventions 221-258: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Staphylococcus epidermis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 174-208,786, 806, 826 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus epidermis in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus epidermis in a sample or clinical specimen.

Inventions 259-269: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus haemoliyticus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 209-215, 796, 803, 820, 938 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus haemoliyticus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus haemoliyticus in a sample or clinical specimen.

Inventions 270-276: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus lugdunensis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 216-221, 888 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus lugdunensis in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus lugdunensis in a sample or clinical specimen.

Inventions 277-284: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Staphylococcus warneri in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 224-230, 831 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus warneri in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus warneri in a sample or clinical specimen.

Inventions 285-286: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus saprophyticus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 222-223 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus saprophyticus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus saprophyticus in a sample or clinical specimen.

Inventions 287-375: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus pneumoniae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N°523-605, 793, 805, 807, 813, 858, 929 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus pneumoniae in a sample or in a clinical specimen.
A kit for the detection of Streptococcus pneumoniae in a sample or clinical specimen.

Inventions 376-420: claims 1-4, 6, 11-12, 14-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Streptococcus pyogenes in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 645-686, 800, 856, 928 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus pyogenes in a sample or in a clinical specimen.
A kit for the detection of Streptococcus pyogenes in a sample or clinical specimen.

Inventions 421-477: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Klebsiella pneumoniae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 399-448, 792, 794, 829, 899, 902, 903, 934 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Klebsiella pneumoniae in a sample or in a clinical specimen.
A kit for the detection of Klebsiella pneumoniae in a sample or clinical specimen.

Inventions 478-504: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Klebsiella oxytoca in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 449-469, 789, 799, 816, 822, 898, 943 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Klebsiella oxytoca in a sample or in a clinical specimen.
A kit for the detection of Klebsiella oxytoca in a sample or clinical specimen.

Inventions 505-571: claims 1-4, 6, 11-12, 13-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Pseudomonas aeruginosa in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 470-522, 785, 787, 791, 797, 804, 821, 832, 838, 841, 842, 884, 889, 905, 926 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Pseudomonas aeruginosa in a sample or in a clinical specimen.
A kit for the detection of Pseudomonas aeruginosa in a sample or clinical specimen.

Inventions 572-611: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus agalactiae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 606-644, 930 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus agalactiae in a sample or in a clinical specimen.
A kit for the detection of Streptococcus agalactiae in a sample or clinical specimen.

Invention 612: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus mutans in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 894 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus mutans in a sample or in a clinical specimen.
A kit for the detection of Streptococcus mutans in a sample or clinical specimen.

Inventions 613-633: claims 1-4, 6, 8, 10-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Enterococcus faecalis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 308-398, 809, 811, 835, 864, 865, 880, 891, 909, 933, 936 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterococcus faecalis in a sample or in a clinical specimen.
A kit for the detection of Enterococcus faecalis in a sample or clinical specimen.

Inventions 634-659: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and characterisation of Enterococcus faecuim in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 810, 817, 824, 847, 853, 861, 866-874, 876-879, 882, 900, 927, 931, 932, 939, 2887 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterococcus faecuim in a sample or in a clinical specimen.
A kit for the detection of Enterococcus faecuim in a sample or clinical specimen.

Inventions 660-736: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and characterisation of Proteus mirabilis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 706-775, 788, 830, 863, 883, 890, 892, 940 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Proteus mirabilis in a sample or in a clinical specimen.
A kit for the detection of Proteus mirabilis in a sample or clinical specimen.

Inventions 737-749: claims 1-4, 6, 11-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Proteus vulgaris in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 776-784, 819, 823, 893, 941 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Proteus vulgaris in a sample or in a clinical specimen.
A kit for the detection of Proteus vulgaris in a sample or clinical specimen.

Inventions 750-835: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of Candida albicans in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 231-307, 910-918 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Candida albicans in a sample or in a clinical specimen.
A kit for the detection of Candida albicans in a sample or clinical specimen.

Inventions 836-864: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Acinetobacter baumanii in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2843-2863, 2865, 2866, 2868-2870, 2888, 2907, 2908 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Acinetobacter baumanii in a sample or in a clinical specimen.
A kit for the detection of Acinetobacter baumanii in a sample or clinical specimen.

Inventions 865-883: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus viridans in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 687-705 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus viridans in a sample or in a clinical specimen.
A kit for the detection of Streptococcus viridans in a sample or clinical specimen.

Invention 884: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Salmonella typhimurium in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 795 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Salmonella typhimurium in a sample or in a clinical specimen.
A kit for the detection of Salmonella typhimurium in a sample or clinical specimen.

Invention 885: claims 1-4, 8, 10-13, 15-25 (partially)

An analytical device for direct identification and characterisation of Enterococcus flavescens in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 881 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterococcus flavescens in a sample or in a clinical specimen.
A kit for the detection of Enterococcus flavescens in a sample or clinical specimen.

Inventions 886-887: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Staphilococcus hominis in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 937, 2906 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphilococcus hominis in a sample or in a clinical specimen.
A kit for the detection of Staphilococcus hominis in a sample.

Inventions 888-889: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Dictyostelium discoideum in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 945, 947 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Dictyostelium discoideum in a sample or in a clinical specimen.
A kit for the detection of Dictyostelium discoideum in a sample or clinical specimen.

Inventions 890-892: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus dysgalactiae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2842, 2904, 2905 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus dysgalactiae in a sample or in a clinical specimen.
A kit for the detection of Streptococcus dysgalactiae in a sample or clinical specimen.

Inventions 893-907: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Enterobacter cloacae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2864, 2967, 2872-2874, 2876-2886 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Enterobacter cloacae in a sample or in a clinical specimen.
A kit for the detection of Enterobacter cloacae in a sample or clini

---

Inventions 908-922: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Stenotrophomonas maltophilia in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2871, 2875, 2889-2901 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Stenotrophomonas maltophilia in a sample or in a clinical specimen.
A kit for the detection of Stenotrophomonas maltophilia in a sample or clinical specimen.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2006/010132

Patent document cited in search report		Publication date	Patent family member(s)			Publication date
EP 1310569	A	14-05-2003	CA	2411537	A1	09-05-2003
			JP	2003144153	A	20-05-2003
			US	2003091991	A1	15-05-2003
WO 9207096	A	30-04-1992	AT	161893	T	15-01-1998
			DE	69128639	D1	12-02-1998
			DE	69128639	T2	23-04-1998
			DK	554355	T3	11-05-1998
			EP	0554355	A1	11-08-1993
			ES	2112868	T3	16-04-1998
			GR	3026488	T3	31-07-1998
			HK	1005488	A1	08-01-1999
			JP	6502305	T	17-03-1994
US 6747137	B1	08-06-2004	US	2007027309	A1	01-02-2007
EP 1344833	A	17-09-2003	US	2003175716	A1	18-09-2003
US 6008341	A1		NONE			
WO 02094868	A	28-11-2002	CA	2440368	A1	28-11-2002
			EP	1373310	A2	02-01-2004
			JP	2005502326	T	27-01-2005
			US	2006115490	A1	01-06-2006